

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

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**FORM 10-Q**

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

**For the quarterly period ended June 30, 2021**  
**or**

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

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

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**Advanced Emissions Solutions, Inc.**

**(Exact name of registrant as specified in its charter)**

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**Delaware**

**(State or other jurisdiction of  
incorporation or organization)**

**27-5472457**

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

**8051 E. Maplewood Ave, Suite 210, Greenwood Village,  
CO**

**(Address of principal executive offices)**

**80111**

**(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)**

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Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes  No

Securities registered pursuant to Section 12(b) of the Act:

<b>Class</b>	<b>Trading Symbol</b>	<b>Name of each exchange on which registered</b>
Common stock, par value \$0.001 per share	ADES	NASDAQ Global Market

As of August 4, 2021, there were 18,853,288 outstanding shares of Advanced Emissions Solutions, Inc. common stock, par value \$0.001 per share.

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## Part I. – FINANCIAL INFORMATION

### Item 1. Consolidated Financial Statements

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

<i>(in thousands, except share data)</i>	As of	
	June 30, 2021	December 31, 2020
<b>ASSETS</b>		
Current assets:		
Cash, cash equivalents and restricted cash	\$ 47,335	\$ 30,932
Receivables, net	11,560	13,125
Receivables, related parties	3,656	3,453
Inventories, net	8,161	9,882
Prepaid expenses and other assets	5,320	4,597
Total current assets	76,032	61,989
Restricted cash, long-term	10,000	5,000
Property, plant and equipment, net of accumulated depreciation of \$5,344 and \$3,340, respectively	31,204	29,433
Intangible assets, net	1,631	1,964
Equity method investments	3,564	7,692
Deferred tax assets, net	3,787	10,604
Other long-term assets, net	32,277	29,989
Total Assets	\$ 158,495	\$ 146,671
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable	\$ 8,162	\$ 7,849
Accrued payroll and related liabilities	2,660	3,257
Current portion of long-term debt	4,373	18,441
Other current liabilities	11,955	12,996
Total current liabilities	27,150	42,543
Long-term debt, net of current portion	3,670	5,445
Other long-term liabilities	11,392	13,473
Total Liabilities	42,212	61,461
Commitments and contingencies (Note 11)		
Stockholders' equity:		
Preferred stock: par value of \$.001 per share, 50,000,000 shares authorized, none outstanding	—	—
Common stock: par value of \$.001 per share, 100,000,000 shares authorized, 23,452,485 and 23,141,284 shares issued, and 18,834,339 and 18,523,138 shares outstanding at June 30, 2021 and December 31, 2020, respectively	23	23
Treasury stock, at cost: 4,618,146 and 4,618,146 shares as of June 30, 2021 and December 31, 2020, respectively	(47,692)	(47,692)
Additional paid-in capital	101,171	100,425
Retained earnings	62,781	32,454
Total stockholders' equity	116,283	85,210
Total Liabilities and Stockholders' Equity	\$ 158,495	\$ 146,671

See Notes to the Condensed Consolidated Financial Statements.

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

<i>(in thousands, except per share data)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
<b>Revenues:</b>				
Consumables	\$ 15,976	\$ 8,170	\$ 33,007	\$ 17,387
License royalties, related party	3,657	3,313	7,723	6,359
<b>Total revenues</b>	<b>19,633</b>	<b>11,483</b>	<b>40,730</b>	<b>23,746</b>
<b>Operating expenses:</b>				
Consumables cost of revenue, exclusive of depreciation and amortization	13,300	7,416	25,774	18,907
Payroll and benefits	2,908	3,812	5,377	6,554
Legal and professional fees	1,431	1,022	3,234	3,065
General and administrative	1,593	2,462	3,508	4,793
Depreciation, amortization, depletion and accretion	1,904	1,733	4,010	4,030
Impairment of long-lived assets	—	26,103	—	26,103
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	—
<b>Total operating expenses</b>	<b>19,194</b>	<b>42,548</b>	<b>39,961</b>	<b>63,452</b>
<b>Operating income (loss)</b>	<b>439</b>	<b>(31,065)</b>	<b>769</b>	<b>(39,706)</b>
<b>Other income (expense):</b>				
Earnings from equity method investments	21,437	8,168	39,749	16,441
Interest expense	(493)	(962)	(1,330)	(2,172)
Other	150	148	571	191
<b>Total other income</b>	<b>21,094</b>	<b>7,354</b>	<b>38,990</b>	<b>14,460</b>
<b>Income (loss) before income tax expense</b>	<b>21,533</b>	<b>(23,711)</b>	<b>39,759</b>	<b>(25,246)</b>
<b>Income tax expense</b>	<b>4,943</b>	<b>103</b>	<b>9,432</b>	<b>461</b>
<b>Net income (loss)</b>	<b>\$ 16,590</b>	<b>\$ (23,814)</b>	<b>\$ 30,327</b>	<b>\$ (25,707)</b>
<b>Earnings (loss) per common share (Note 1):</b>				
Basic	\$ 0.91	\$ (1.32)	\$ 1.66	\$ (1.43)
Diluted	\$ 0.90	\$ (1.32)	\$ 1.65	\$ (1.43)
<b>Weighted-average number of common shares outstanding:</b>				
Basic	18,271	18,014	18,219	17,974
Diluted	18,398	18,014	18,356	17,974

See Notes to the Condensed Consolidated Financial Statements.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Condensed Consolidated Statements of Changes in Stockholders' Equity**  
*(Unaudited)*

<i>(Amounts in thousands, except share data)</i>	Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings	Total Stockholders' Equity
	Shares	Amount	Shares	Amount			
Balances, January 1, 2021	23,141,284	\$ 23	(4,618,146)	\$(47,692)	\$ 100,425	\$ 32,454	\$ 85,210
Stock-based compensation	381,339	—	—	—	421	—	421
Repurchase of common shares to satisfy minimum tax withholdings	(40,975)	—	—	—	(216)	—	(216)
Net income	—	—	—	—	—	13,737	13,737
Balances, March 31, 2021	23,481,648	\$ 23	(4,618,146)	\$(47,692)	\$ 100,630	\$ 46,191	\$ 99,152
Stock-based compensation	(25,330)	—	—	—	566	—	566
Repurchase of common shares to satisfy minimum tax withholdings	(3,833)	—	—	—	(25)	—	(25)
Net income	—	—	—	—	—	16,590	16,590
Balances, June 30, 2021	<u>23,452,485</u>	<u>\$ 23</u>	<u>(4,618,146)</u>	<u>\$(47,692)</u>	<u>\$ 101,171</u>	<u>\$ 62,781</u>	<u>\$ 116,283</u>

<i>(Amounts in thousands, except share data)</i>	Common Stock		Treasury Stock		Additional Paid-in Capital	Retained Earnings	Total Stockholders' Equity
	Shares	Amount	Shares	Amount			
Balances, January 1, 2020	22,960,157	\$ 23	(4,597,533)	\$(47,533)	\$ 98,466	\$ 57,336	\$ 108,292
Stock-based compensation	218,259	—	—	—	506	—	506
Repurchase of common shares to satisfy minimum tax withholdings	(64,198)	—	—	—	(376)	—	(376)
Cash dividends declared on common stock	—	—	—	—	—	(4,590)	(4,590)
Repurchase of common shares	—	—	(20,613)	(159)	—	—	(159)
Net loss	—	—	—	—	—	(1,893)	(1,893)
Balances, March 31, 2020	23,114,218	\$ 23	(4,618,146)	\$(47,692)	\$ 98,596	\$ 50,853	\$ 101,780
Stock-based compensation	(3,549)	—	—	—	1,138	—	1,138
Repurchase of common shares to satisfy minimum tax withholdings	(384)	—	—	—	(2)	—	(2)
Net loss	—	—	—	—	—	(23,814)	(23,814)
Balances, June 30, 2020	<u>23,110,285</u>	<u>\$ 23</u>	<u>(4,618,146)</u>	<u>\$(47,692)</u>	<u>\$ 99,732</u>	<u>\$ 27,039</u>	<u>\$ 79,102</u>

See Notes to the Condensed Consolidated Financial Statements.

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

<i>(in thousands)</i>	Six Months Ended June 30,	
	2021	2020
<b>Cash flows from operating activities</b>		
Net income (loss)	\$ 30,327	\$ (25,707)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Deferred income tax expense	6,817	11,647
Depreciation, amortization, depletion and accretion	4,010	4,030
Impairment of long-lived assets	—	26,103
Operating lease expense	912	1,353
Amortization of debt discount and debt issuance costs	945	709
Gain on change in estimate, asset retirement obligation	(1,942)	—
Stock-based compensation expense	987	1,644
Earnings from equity method investments	(39,749)	(16,441)
Other non-cash items, net	(319)	31
Changes in operating assets and liabilities:		
Receivables and related party receivables	1,362	2,854
Prepaid expenses and other assets	(723)	(11,129)
Inventories, net	1,327	(590)
Other long-term assets, net	616	(224)
Accounts payable	150	(1,095)
Accrued payroll and related liabilities	(597)	134
Other current liabilities	(1,468)	(515)
Operating lease liabilities	(1,314)	(1,213)
Other long-term liabilities	(2,334)	(22)
Distributions from equity method investees, return on investment	19,144	32,516
Net cash provided by operating activities	18,151	24,085
<b>Cash flows from investing activities</b>		
Distributions from equity method investees in excess of cumulative earnings	24,732	—
Acquisition of property, plant, equipment, and intangible assets, net	(4,573)	(4,189)
Mine development costs	(653)	(507)
Proceeds from sale of property and equipment	895	—
Net cash provided by (used in) investing activities	20,401	(4,696)
<b>Cash flows from financing activities</b>		
Principal payments on term loan	(16,000)	(12,000)
Principal payments on finance lease obligations	(818)	(676)
Dividends paid	(90)	(4,828)
Repurchase of common shares	—	(159)
Repurchase of common shares to satisfy tax withholdings	(241)	(378)
Borrowings from Paycheck Protection Program Loan	—	3,305
Net cash used in financing activities	(17,149)	(14,736)
Increase in Cash and Cash Equivalents and Restricted Cash	21,403	4,653
Cash and Cash Equivalents and Restricted Cash, beginning of period	35,932	17,080
Cash and Cash Equivalents and Restricted Cash, end of period	\$ 57,335	\$ 21,733
Supplemental disclosure of non-cash investing and financing activities:		
Acquisition of property, plant and equipment through accounts payable	\$ 163	\$ 223
Dividends payable	\$ —	\$ 77

See Notes to the Condensed Consolidated Financial Statements.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

**Note 1 - Basis of Presentation**

*Nature of Operations*

Advanced Emissions Solutions, Inc. ("ADES" or the "Company") is a Delaware corporation with its principal office located in Greenwood Village, Colorado and operations located in Louisiana. The Company is principally engaged in the sale of consumable air and water treatment options including activated carbon ("AC") and chemical technologies. The Company's proprietary technologies in the advanced purification technologies ("APT") market enable customers to reduce air and water contaminants, including mercury and other pollutants, to maximize utilization levels and improve operating efficiencies to meet the challenges of existing and pending emission control regulations. Through its wholly-owned subsidiary, ADA Carbon Solutions, LLC ("Carbon Solutions"), the Company manufactures and sells AC used to capture and remove contaminants for coal-fired power plants and industrial and water treatment markets. Carbon Solutions also owns an associated lignite mine that supplies the primary raw material for manufacturing AC.

Through its equity ownership in Tinum Group, LLC ("Tinum Group") and Tinum Services, LLC ("Tinum Services"), both of which are unconsolidated entities, the Company generates substantial earnings. Tinum Group provides reduction of mercury and nitrogen oxide ("NO<sub>x</sub>") emissions at select coal-fired power generators through the production and sale of refined coal ("RC") that qualifies for tax credits under the Internal Revenue Code ("IRC") Section 45 - Production Tax Credit ("Section 45 tax credits"). The Company also earns royalties for technologies that are licensed to Tinum Group and used at certain RC facilities to enhance combustion and reduced emissions of NO<sub>x</sub> and mercury from coal burned to generate electrical power. Tinum Services operates and maintains the RC facilities under operating and maintenance agreements with Tinum Group and owners or lessees of the RC facilities. Both Tinum Group and Tinum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021.

The Company's sales occur principally in the United States. See Note 17 for additional information regarding the Company's operating segments.

*Basis of Presentation*

The accompanying Condensed Consolidated Financial Statements of ADES are unaudited and have been prepared in conformity with accounting principles generally accepted in the United States ("U.S. GAAP") and with Article 10 of Regulation S-X of the Securities and Exchange Commission. In compliance with those instructions, certain information and footnote disclosures normally included in annual consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted.

The unaudited Condensed Consolidated Financial Statements of ADES in this quarterly report ("Quarterly Report") are presented on a consolidated basis and include ADES and its wholly-owned subsidiaries (collectively, the "Company"). Also included within the unaudited Condensed Consolidated Financial Statements are the Company's unconsolidated equity investments: Tinum Group, Tinum Services and GWN Manager, LLC ("GWN Manager"), which are accounted for under the equity method of accounting, and Highview Enterprises Limited (the "Highview Investment"), which is accounted for in accordance with U.S. GAAP applicable to equity investments that do not qualify for the equity method of accounting.

Results of operations and cash flows for the interim periods are not necessarily indicative of the results that may be expected for the entire year. All significant intercompany transactions and accounts were eliminated in consolidation for all periods presented in this Quarterly Report.

In the opinion of management, these Condensed Consolidated Financial Statements include all normal and recurring adjustments considered necessary for a fair presentation of the results of operations, financial position, stockholders' equity 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, 2020 (the "2020 Form 10-K"). Significant accounting policies disclosed therein have not changed.

*Earnings (Loss) Per Share*

Basic earnings (loss) per share is computed using the two-class method, which is an earnings allocation formula that determines earnings (loss) per share for common stock and any participating securities according to dividend and participating rights in undistributed earnings (losses). Pursuant to U.S. GAAP, the Company has elected not to separately present basic or diluted earnings per share attributable to participating securities in the Condensed Consolidated Statements of Operations.



**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

Diluted earnings (loss) per share is computed in a manner consistent with that of basic earnings per share, while considering other potentially dilutive securities. For the three and six months ended June 30, 2021, potentially dilutive securities consist of unvested non-participating restricted stock awards ("RSA's"), as well as contingent performance stock units ("PSU's"). For the three and six months ended June 30, 2020, potentially dilutive securities consist of both unvested, participating and non-participating RSA's, as well as outstanding options to purchase common stock ("Stock Options") and PSU's.

The dilutive effect, if any, for non-participating RSA's, Stock Options and PSU's is determined using the greater of dilution as calculated under the treasury stock method or the two-class method. Potentially dilutive securities are excluded from diluted earnings per share when their effect is anti-dilutive. When there is a net loss for a period, all potentially dilutive securities are anti-dilutive and are excluded from the calculation of diluted loss per share for that period.

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

<i>(in thousands, except per share amounts)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net income (loss)	\$ 16,590	\$ (23,814)	\$ 30,327	\$ (25,707)
Less: Dividends and undistributed income (loss) allocated to participating securities	—	(17)	—	(19)
Income (loss) attributable to common stockholders	\$ 16,590	\$ (23,797)	\$ 30,327	\$ (25,688)
Basic weighted-average common shares outstanding	18,271	18,014	18,219	17,974
Add: dilutive effect of equity instruments	127	—	137	—
Diluted weighted-average shares outstanding	18,398	18,014	18,356	17,974
Earnings (loss) per share - basic	\$ 0.91	\$ (1.32)	\$ 1.66	\$ (1.43)
Earnings (loss) per share - diluted	\$ 0.90	\$ (1.32)	\$ 1.65	\$ (1.43)

For the three and six months ended June 30, 2021 and 2020, potentially dilutive securities convertible to 0.1 million and 0.7 million and zero and 0.3 million shares of common stock, respectively, were outstanding but were not included in the computation of diluted net income (loss) per share because the effect would have been anti-dilutive.

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 2020 Form 10-K. Actual results could differ from these estimates.

Due to the coronavirus ("COVID-19") pandemic, there has been uncertainty and disruption in the global economy and financial markets. Additionally, due to COVID-19, overall power generation and coal-fired power demand may decline, which could have a material adverse effect on the Company. The Company is not aware of any specific event or circumstance due to COVID-19 that would require an update to its estimates or judgments or a revision of the carrying values of its assets or liabilities through the date of this Quarterly Report. These estimates may change as new events occur and additional information is obtained. Actual results could differ materially from these estimates under different assumptions or conditions.

Risks and Uncertainties

The Company's earnings are significantly affected by equity earnings from Tinum Group. As of June 30, 2021, Tinum Group has 22 invested RC facilities, of which 8 are leased to a single customer. Both Tinum Group and Tinum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021. During the second quarter of 2021, Tinum Group ceased operating one RC facility, with the remaining RC facilities expected to cease operations during the second half of 2021. The loss of Tinum Group's customers, reduction in revenue streams as a result of lease renewals and the expiration of Section 45 tax credits will have a significant adverse impact on Tinum Group's financial position, results of operations and cash flows, which in turn will have a material adverse impact on the Company's financial position, results of operations and cash flows.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

The Company's revenues, sales volumes, earnings and cash flows are significantly affected by prices of competing power generation sources such as natural gas and renewable energy. During periods of low natural gas prices, natural gas provides a competitive alternative to coal-fired power generation and therefore, coal consumption may be reduced, which reduces the demand for the Company's products. However, during periods of higher prices for competing power generation sources, the demand for the Company's products increases due to the increase in coal consumption. In addition, coal consumption and demand for the Company's products are also affected by the demand for electricity, which is higher in the warmer and colder months of the year. Abnormal temperatures during the summer and winter months may significantly affect coal consumption and thus the demand for the Company's products.

Reclassifications

Certain balances have been reclassified from the prior year to conform to the current year presentation. Such reclassifications had no effect on the Company's results of operations or financial position in any of the periods presented.

New Accounting Standards

*Adopted*

In December 2019, the FASB issued ASU 2019-12, Income Taxes (Topic 740) Simplifying the Accounting for Income Taxes ("ASU 2019-12"). The amendments in ASU 2019-12 simplify various aspects related to accounting for income taxes by removing certain exceptions contained in Topic 740 and also clarify and amends existing guidance in Topic 740 to improve consistent application. ASU 2019-12 is effective for public business entities beginning after December 15, 2020, including interim periods within those years, and early adoption is permitted. The Company adopted ASU 2019-12 effective January 1, 2021 and it did not have a material impact on the Company's financial statements and disclosures.

*Not Yet Adopted*

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326) Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). The main objective of ASU 2016-13 is to provide financial statement users with more decision-useful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. To achieve this objective, the amendments in ASU 2016-13 replace the incurred loss impairment methodology in current U.S. GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to form credit loss estimates. ASU 2016-13 is effective for "smaller reporting companies" (as defined by the Securities and Exchange Commission) for fiscal years beginning after December 15, 2022, including interim periods within those years, and must be adopted under a modified retrospective method approach. The Company is currently evaluating the provisions of this guidance and assessing the impact on its financial statements and disclosures and does not believe this standard will have a material impact on its financial statements and disclosures.

**Note 2 - Customer Supply Agreement**

On September 30, 2020, the Company and Cabot Norit Americas, Inc., ("Cabot") entered into a supply agreement (the "Supply Agreement") pursuant to which the Company agreed to sell and deliver to Cabot, and Cabot agreed to purchase and accept from the Company certain lignite-based AC products ("Furnace Products").

As part of the Supply Agreement, the Company and Cabot agreed to additional terms whereby Cabot reimburses the Company for certain capital expenditures incurred by the Company that are necessary to manufacture the Furnace Products, and both the Company and Cabot must mutually agree on these capital expenditures in advance of procurement and commissioning. Capital expenditures incurred that benefit both the Company and Cabot ("Shared Capital") are partially reimbursable by Cabot and recognized as revenues based on a formula contained in the Supply Agreement. Revenues from, and reimbursements of Shared Capital are recognized and billable, respectively, beginning on the first day of a half year (January 1 and July 1 of a calendar year) following the placed in service date of a Shared Capital asset(s).

Capital expenditures incurred that benefit Cabot exclusively ("Specific Capital") are fully reimbursable by Cabot and recognized as revenues based on a formula contained in the Supply Agreement. Revenues earned from Specific Capital are recognized beginning on the first day of a half year following the placed in service date of a Specific Capital asset(s). Reimbursements of Specific Capital are billable in quarterly installments beginning on the first day of a half year following the placed in service date of a Specific Capital asset(s). In the event that Cabot ceases to make purchases under the Supply Agreement, Cabot is obligated to pay the balance of any outstanding amounts for Specific Capital.

Revenues earned from both Shared Capital and Specific Capital are reported in the Consumables revenue line item in the Statements of Operations.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

**Note 3 - Acquisition of Marshall Mine**

Concurrently with the execution of the Supply Agreement, on September 30, 2020, the Company entered into an agreement to purchase from Cabot 100% of the membership interests in Marshall Mine, LLC (the "Marshall Mine Purchase Agreement") for a nominal cash purchase price. Marshall Mine, LLC owns a lignite mine located outside of Marshall, Texas (the "Marshall Mine"). The Company concluded that the Marshall Mine did not have any remaining economic reserves and independently determined to immediately commence activities to shutter it. On September 30, 2020 the Company entered into a reclamation contract (the "Reclamation Contract") with a third party that provided a capped cost agreement, subject to certain contingencies, in the amount of approximately \$19.7 million plus an obligation to pay certain direct costs estimated to be \$3.6 million (collectively, the "Reclamation Costs") over the estimated reclamation period of 10 years (the "Reclamation Period"). Under the terms of the Supply Agreement, Cabot is obligated to reimburse the Company for \$10.2 million of Reclamation Costs (the "Reclamation Reimbursements"), which are payable semi-annually over 13 years and inclusive of interest. In the event that Cabot has a change in control as described in the Supply Agreement, all outstanding balances of the Reclamation Reimbursements shall be due and payable in full. See further discussion of the Reclamation Costs and Reclamation Reimbursements in Note 4.

The Marshall Mine Purchase Agreement included the acquisition of certain assets that will be consumed and the assumption of certain liabilities that are to be paid in reclamation of the Marshall Mine in addition to the incurrence of an obligation for the Reclamation Costs. The Company accounted for the Marshall Mine Purchase Agreement as an asset acquisition.

As the Marshall Mine Purchase Agreement represents a transaction with a customer of net assets acquired and liabilities assumed from Cabot, the Company accounted for the excess of the fair value of liabilities assumed over assets acquired as upfront consideration transferred to a customer, Cabot (the "Upfront Customer Consideration"). The amount of the Upfront Customer Consideration was also recognized net of an additional asset recognized in the Marshall Mine Acquisition, which was comprised of a receivable from Cabot (the "Cabot Receivable") for the Reclamation Reimbursements. The Cabot Receivable is further discussed in Note 4.

The total Upfront Customer Consideration is being amortized as a reduction to revenues on a straight-line basis over the expected 15-year contractual period of the Supply Agreement.

As part of the Marshall Mine Purchase Agreement, the Company assumed liabilities, whose fair value exceeded the fair value of assets acquired. A summary of the net assets acquired and liabilities assumed and the additional assets recorded in the Marshall Mine Purchase Agreement as of September 30, 2020 are shown in the table below. The Company completed additional analysis of the assets acquired and liabilities assumed and recorded adjustments as of December 31, 2020 as shown in the table below.

<i>(in thousands)</i>	<b>As Originally Reported</b>	<b>Adjustments</b>	<b>As Adjusted</b>
<b>Assets acquired:</b>			
Receivables	\$ —	\$ 513	\$ 513
Property, plant and equipment	3,863	—	3,863
Spare parts	100	—	100
<b>Liabilities assumed:</b>			
Accounts payable and accrued expenses	(673)	160	(513)
Asset retirement obligation	(21,328)	—	(21,328)
Net assets acquired and liabilities assumed from Marshall Mine acquisition	(18,038)	673	(17,365)
Cabot Receivable	9,749	—	9,749
Upfront Customer Consideration	<u>\$ 8,289</u>	<u>\$ (673)</u>	<u>\$ 7,616</u>

The Company also evaluated the Marshall Mine entity as a potential variable interest entity ("VIE"), and determined that Marshall Mine, LLC was a VIE and the Company was its primary beneficiary. Therefore, the Company consolidates Marshall Mine, LLC's assets and liabilities in the consolidated financial statements.

**Note 4 - Marshall Mine Asset Retirement Obligation and Cabot Receivable**

*Asset Retirement Obligation*

As of September 30, 2020, the Company recorded an asset retirement obligation (the "Marshall Mine ARO") for the total Reclamation Costs of \$21.3 million as measured at the expected future cash flows of \$23.7 million, inclusive of contingency costs, discounted to their present value using a discount rate based on a credit-adjusted, risk-free rate of 7.0%. As of June 30, 2021 and December 31, 2020, the carrying value of the Marshall Mine ARO was \$11.7 million and \$18.1 million, respectively.

As of June 30, 2021, the Company revised its estimate of future obligations owed for the reclamation of Marshall Mine primarily based on scope reductions related to future reclamation requirements. As a result, the Company reduced the Marshall Mine ARO by \$1.9 million as of June 30, 2021 and recorded a corresponding gain on change in estimate for the three and six months ended June 30, 2021. This is included as "Gain on change in estimate, asset retirement obligation" in the Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2021.

*Cabot Receivable*

As of September 30, 2020, the Company recorded the Cabot Receivable at its estimated fair value of \$9.7 million, reflecting a discount rate of approximately 1.5% or \$0.5 million. There were no significant related fees or costs associated with the Cabot Receivable. The Company did not elect the fair value option in its initial or subsequent accounting for the Cabot Receivable.

The Cabot Receivable requires Cabot to pay the Reclamation Reimbursements to the Company in the amount of \$10.2 million inclusive of interest based on a mutually agreed-upon payment schedule through 2033. Interest is accreted on the Cabot Receivable and recognized as interest income. An allowance for the Cabot Receivable asset is assessed periodically, and no allowance was deemed necessary as of June 30, 2021 and December 31, 2020.

*Surety Bond*

As the owner of the Marshall Mine, the Company is required to post a surety bond to ensure performance of its reclamation activities. On September 30, 2020, the Company and a third party entered into a surety bond indemnification agreement (the "Surety Agreement") pursuant to which the Company secured and posted a \$30.0 million surety bond (the "Bond") with the local regulatory agency. On June 7, 2021, the third party agreed to reduce the Surety Bond amount to \$16.6 million. The Bond will remain in place until the Marshall Mine is fully reclaimed, and may be further reduced in amount from time to time as the Company progresses with its reclamation activities. As of June 30, 2021, the Company was required to post collateral of \$10.0 million for the obligations due under the Reclamation Contract, which is recorded as long-term restricted cash on the Condensed Consolidated Balance Sheet.

**Note 5 - COVID-19**

In March 2020, the federal government passed the Coronavirus Aid, Relief, and Security Act (the "CARES Act"), which provided among other things the creation of the Paycheck Protection Plan ("PPP"), which is sponsored and administered by the U.S. Small Business Administration ("SBA"). On April 20, 2020, the Company executed a loan agreement (the "PPP Loan") under the PPP, evidenced by a promissory note, with BOK, NA dba Bank of Oklahoma ("BOK"), providing for \$3.3 million in proceeds, which was funded to the Company on April 21, 2020. In June 2020, the Paycheck Protection Program Flexibility Act of 2020 (the "PPPFA") was signed into law and established the payment dates in the event that amounts borrowed under the PPP are not forgiven. The PPP Loan matures April 21, 2022, but may be forgiven subject to the terms of the PPP and approval by the SBA. The Company recorded the PPP Loan as a debt obligation and accrues interest over the term of the PPP Loan.

The interest rate on the PPP Loan is 1.00%. The PPP Loan is unsecured and contains customary events of default relating to, among other things, payment defaults, making materially false and misleading representations to the SBA or BOK, or breaching the terms of the PPP Loan. The occurrence of an event of default may result in the repayment of all amounts outstanding, collection of all amounts owing from the Company, or filing suit and obtaining judgment against the Company.

Under the PPPFA, monthly payments of principal and interest commence on the later of 10 months following the "covered period" (as defined in the PPPFA) or the date that BOK notifies the Company that the SBA has notified BOK that all or a portion of the PPP Loan has not been forgiven. In January 2021, the Company submitted its application to the SBA for forgiveness of the PPP Loan. As of June 30, 2021, the PPP Loan principal and accrued interest are classified as current in the Condensed Consolidated Balance Sheets.

On July 27, 2021, the Company received formal notification in the form of a letter dated July 19, 2021 from BOK that the SBA approved the Company's PPP Loan forgiveness application for the Company's Loan in the amount of \$3.3 million (including accrued interest). The Company will account for the debt forgiveness during its fiscal third quarter of 2021 and will recognize a gain on extinguishment of debt in the amount of \$3.3 million in the Consolidated Statements of Operations.

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The CARES Act also provided for the deferral of payroll tax payments for all payroll taxes incurred through December 31, 2020. The Company elected to defer payments of payroll taxes for the periods allowed under the CARES Act and will repay 50% by December 31, 2021 and 50% by December 31, 2022. As of June 30, 2021, the Company has deferred \$0.4 million of payroll tax payments under the CARES Act.

**Note 6 - Equity Method Investments**

*Tinum Group, LLC*

As of June 30, 2021 and December 31, 2020, the Company's ownership interest in Tinum Group was 42.5%. Tinum Group supplies technology equipment and technical services at select coal-fired generators, but its primary purpose is to put into operation facilities that produce and sell RC that lower emissions and also qualify for Section 45 tax credits. The Company concluded that Tinum Group was a VIE, but the Company does not have the power to direct the activities that most significantly impact Tinum Group's economic performance, as the voting partners of Tinum Group have identical voting rights, equity control interests and board control interests, and therefore power is shared. Accordingly, the Company has accounted for its investment in Tinum Group under the equity method of accounting since inception.

The following table summarizes the results of operations of Tinum Group:

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Gross profit	\$ 8,820	\$ 6,868	\$ 11,495	\$ 11,878
Operating, selling, general and administrative expenses	12,429	11,919	26,231	24,695
Loss from operations	(3,609)	(5,051)	(14,736)	(12,817)
Other income (expenses), net	3,150	2,144	4,003	5,787
Loss attributable to noncontrolling interest	29,038	18,823	64,616	38,094
Net income available to members	\$ 28,579	\$ 15,916	\$ 53,883	\$ 31,064
ADES equity earnings from Tinum Group	\$ 19,125	\$ 6,764	\$ 35,487	\$ 13,202

For the three and six months ended June 30, 2021, the Company recognized earnings from Tinum Group's net income available to members that were different from its pro-rata share of Tinum Group's net income available to members, as cash distributions for the three and six months ended June 30, 2021 exceeded the carrying value of the Tinum Group equity investment. For 2021, the Company expects to recognize such excess contributions as equity method earnings in the period the distributions occur, limited to the carrying value of the Tinum Group equity investment. For the three and six months ended June 30, 2020, the Company recognized its pro-rata share of Tinum Group's net income available to its members for the respective period.

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The following tables present the Company's investment balance, equity earnings and cash distributions in excess of the investment balance, if any, for the three and six months ended June 30, 2021 and 2020 *(in thousands)*:

Description	Date(s)	Investment balance	ADES equity earnings	Cash distributions	Memorandum Account: Cash distributions and equity earnings in (excess) of investment balance
Beginning balance	12/31/2020	\$ 3,387	\$ —	\$ —	\$ —
ADES proportionate share of income from Tinium Group	First Quarter	10,755	10,755	—	—
Cash distributions from Tinium Group	First Quarter	(19,749)	—	19,749	—
Adjustment for current year cash distributions in excess of investment balance	First Quarter	5,607	5,607	—	(5,607)
Total investment balance, equity earnings and cash distributions	3/31/2021	<u>—</u>	<u>\$ 16,362</u>	<u>\$ 19,749</u>	<u>(5,607)</u>
ADES proportionate share of income from Tinium Group	Second Quarter	12,146	\$ 12,146	\$ —	—
Recovery of prior cash distributions in excess of investment balance (prior to cash distributions)	Second Quarter	(5,607)	(5,607)	—	5,607
Cash distributions from Tinium Group	Second Quarter	(19,125)	—	19,125	—
Adjustment for current year cash distributions in excess of investment balance	Second Quarter	12,586	12,586	—	(12,586)
Total investment balance, equity earnings and cash distributions	6/30/2021	<u>\$ —</u>	<u>\$ 19,125</u>	<u>\$ 19,125</u>	<u>\$ (12,586)</u>

Description	Date(s)	Investment balance	ADES equity earnings	Cash distributions
Beginning balance	12/31/2019	\$ 32,280	\$ —	\$ —
ADES proportionate share of income from Tinium Group	First Quarter	6,438	6,438	—
Cash distributions from Tinium Group	First Quarter	(13,764)	—	13,764
Total investment balance, equity earnings and cash distributions	3/31/2020	<u>24,954</u>	<u>\$ 6,438</u>	<u>\$ 13,764</u>
ADES proportionate share of income from Tinium Group	Second Quarter	6,764	\$ 6,764	\$ —
Cash distributions from Tinium Group	Second Quarter	(13,600)	—	13,600
Total investment balance, equity earnings and cash distributions	6/30/2020	<u>\$ 18,118</u>	<u>\$ 6,764</u>	<u>\$ 13,600</u>

*Tinium Services, LLC*

The Company has a 50% voting and economic interest in Tinium Services as of June 30, 2021 and December 31, 2020. The Company determined that Tinium Services was not a VIE and further evaluated it for consolidation under the voting interest model. Because the Company does not own greater than 50% of the outstanding voting shares, either directly or indirectly, it has accounted for its investment in Tinium Services under the equity method of accounting since inception. As of June 30, 2021 and December 31, 2020, the Company's investment in Tinium Services was \$3.5 million and \$4.2 million, respectively.

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

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Gross loss	\$ (22,641)	\$ (20,418)	\$ (41,163)	\$ (42,677)
Operating, selling, general and administrative expenses	47,355	43,515	101,722	89,268
Loss from operations	(69,996)	(63,933)	(142,885)	(131,945)
Other income (expenses), net	32	(330)	(394)	(615)
Loss attributable to noncontrolling interest	74,587	67,071	151,802	139,043
Net income	\$ 4,623	\$ 2,808	\$ 8,523	\$ 6,483
ADES equity earnings from Tinum Services	\$ 2,312	\$ 1,404	\$ 4,262	\$ 3,242

Included in the Consolidated Statements of Operations of Tinum Services for the three and six months ended June 30, 2021 and 2020 were losses attributable to noncontrolling interests of Tinum Services' VIE entities, which were eliminated in the calculations of Tinum Services' net income attributable to the Company's interest.

The following table details the carrying value of the Company's respective equity method investments included in the Equity method investments line item on the Condensed Consolidated Balance Sheets and indicates the Company's maximum exposure to loss:

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Equity method investment in Tinum Group	\$ —	\$ 3,387
Equity method investment in Tinum Services	3,501	4,242
Equity method investment in other	63	63
Total equity method investments	\$ 3,564	\$ 7,692

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

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Earnings from Tinum Group	\$ 19,125	\$ 6,764	\$ 35,487	\$ 13,202
Earnings from Tinum Services	2,312	1,404	4,262	3,242
Earnings (loss) from other	—	—	—	(3)
Earnings from equity method investments	<u>\$ 21,437</u>	<u>\$ 8,168</u>	<u>\$ 39,749</u>	<u>\$ 16,441</u>

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

<i>(in thousands)</i>	Six Months Ended June 30,	
	2021	2020
Distributions from equity method investees, return on investment		
Tinum Group	\$ 14,142	\$ 27,364
Tinum Services	5,002	5,152
	<u>\$ 19,144</u>	<u>\$ 32,516</u>
Distributions from equity method investees in excess of investment basis		
Tinum Group	\$ 24,732	\$ —
	<u>\$ 24,732</u>	<u>\$ —</u>

**Note 7 - Inventories, net**

The following table summarizes the Company's inventories recorded at the lower of average cost or net realizable value as of June 30, 2021 and December 31, 2020:

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Product inventory, net	\$ 6,639	\$ 8,361
Raw material inventory	1,522	1,521
	<u>\$ 8,161</u>	<u>\$ 9,882</u>



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**Note 8 - Debt Obligations**

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Finance lease obligations	\$ 4,738	\$ 5,526
PPP Loan	3,305	3,305
Senior Term Loan due December 2021, related party	—	16,000
Less: net unamortized debt issuance costs	—	(465)
Less: net unamortized debt discount	—	(480)
Senior Term Loan due December 2021, net	—	15,055
	<u>8,043</u>	<u>23,886</u>
Less: Current maturities	(4,373)	(18,441)
Total long-term debt	<u>\$ 3,670</u>	<u>\$ 5,445</u>

***Senior Term Loan***

On December 7, 2018, the Company, and ADA-ES, Inc. ("ADA"), a wholly-owned subsidiary, and certain other subsidiaries of the Company as guarantors, The Bank of New York Mellon as administrative agent, and Apollo Credit Strategies Master Fund Ltd and Apollo A-N Credit Fund (Delaware) L.P. (collectively "Apollo"), affiliates of a beneficial owner of greater than five percent of the Company's common stock and a related party, entered into the Term Loan and Security Agreement (the "Senior Term Loan") in the amount of \$70.0 million less original issue discount of \$2.1 million. Proceeds from the Senior Term Loan were used to fund the acquisition of Carbon Solutions. The Company also paid debt issuance costs of \$2.0 million related to the Senior Term Loan. The Senior Term Loan bore interest at a rate equal to 3-month LIBOR (subject to a 1.5% floor) + 4.75% per annum, which was adjusted quarterly to the current 3-month LIBOR rate, and interest was payable quarterly in arrears. The Senior Term Loan was secured by substantially all the assets of the Company, including the cash flows from Tinum Group and Tinum Services (collectively, the "Tinum Entities"), but excluding the Company's equity interests in the Tinum entities.

On June 1, 2021 and prior to the Senior Term Loan's maturity date, the Company paid-off in its entirety the Senior Term Loan and all remaining accrued interest through this date in the amount of \$6.1 million. The Company did not incur any prepayment fees associated with the early pay-off.

***Line of Credit***

In September 2013, ADA, as borrower, and the Company, as guarantor, entered into a line credit (the "Line of Credit") with a bank (the "Lender") for an aggregate borrowing amount of \$10.0 million, which was secured by certain amounts due to the Company from certain Tinum Group RC leases. The Line of Credit has been amended 15 times from the period from December 2, 2013 through June 30, 2021 and included a reduction in the borrowing amount to \$5.0 million in September 2018.

On March 23, 2021, ADA, the Company and the Lender entered into an amendment to the Line of Credit (the "Fifteenth Amendment"), which extended the maturity date of the Line of Credit to December 31, 2021 and increased the minimum cash requirement from \$5.0 million to \$6.0 million.

As of June 30, 2021 and December 31, 2020, there were no outstanding borrowings under the Line of Credit.

On July 29, 2021, the Company and the Lender entered into the Sixteenth Amendment (the "Sixteenth Amendment") to the Line of Credit. The Sixteenth Amendment amends certain terms and conditions related to collateral securing the Line of Credit.

**Note 9 - Leases**

As of June 30, 2021 and December 31, 2020, the Company had obligations under finance leases of \$4.7 million and \$5.5 million, respectively, and obligations under operating leases of \$5.0 million and \$3.0 million, respectively. As of June 30, 2021 and December 31, 2020, the Company had right of use ("ROU") assets, net of accumulated amortization, under finance leases of \$2.0 million and \$2.4 million, respectively, and ROU assets, net of accumulated amortization, under operating leases of \$4.4 million and \$1.9 million, respectively.

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Finance leases

ROU assets under finance leases and finance lease liabilities are included in Property, plant and equipment and Current portion and Long-term portion of borrowings, respectively, in the Condensed Consolidated Balance Sheets as of June 30, 2021 and December 31, 2020. Interest expense related to finance lease liabilities and amortization of ROU assets under finance leases are included in Interest expense and Depreciation, amortization, depletion and accretion, respectively, in the Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2021 and June 30, 2020.

Operating leases

ROU assets under operating leases and operating lease liabilities are included in Other long-term assets and Other current liabilities and Other long-term liabilities, respectively, in the Condensed Consolidated Balance Sheets as of June 30, 2021 and December 31, 2020.

Lease expense for operating leases for the three and six months ended June 30, 2021 was \$0.9 million and \$1.9 million, respectively, of which \$0.8 million and \$1.7 million, respectively, is included in Consumables - cost of revenue, exclusive of depreciation and amortization, and \$0.1 million and \$0.2 million, respectively, is included in General and administrative in the Condensed Consolidated Statement of Operations. Lease expense for operating leases for the three and six months ended June 30, 2020 was \$1.1 million and \$2.4 million, respectively, of which \$1.0 million and \$2.0 million, respectively, is included in Consumables - cost of revenue, exclusive of depreciation and amortization, and \$0.2 million and \$0.4 million, respectively, is included in General and administrative in the Condensed Consolidated Statement of Operations.

Lease financial information as of and for the three and six months ended June 30, 2021 and 2020 is provided in the following table:

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
<b>Finance lease cost:</b>				
Amortization of right-of-use assets	\$ 174	\$ 465	\$ 348	\$ 979
Interest on lease liabilities	70	93	149	187
Operating lease cost	453	676	912	1,529
Short-term lease cost	406	424	973	706
Variable lease cost (1)	12	44	21	137
<b>Total lease cost</b>	<b>\$ 1,115</b>	<b>\$ 1,702</b>	<b>\$ 2,403</b>	<b>\$ 3,538</b>

**Other Information:**

Cash paid for amounts included in the measurement of lease liabilities:

Operating cash flows from finance leases	\$ 149	\$ 187
Operating cash flows from operating leases	\$ 1,314	\$ 1,213
Financing cash flows from finance leases	\$ 818	\$ 676
Right-of-use assets obtained in exchange for new operating lease liabilities	\$ 3,362	\$ 60
Weighted-average remaining lease term - finance leases	3.3 years	3.8 years
Weighted-average remaining lease term - operating leases	2.9 years	2.1 years
Weighted-average discount rate - finance leases	6.4 %	6.1 %
Weighted-average discount rate - operating leases	7.8 %	8.5 %

(1) Primarily includes common area maintenance, property taxes and insurance payable to lessors.

**Note 10 - Revenues**

Trade receivables represent an unconditional right to consideration in exchange for goods or services transferred to a customer. The Company invoices its customers in accordance with the terms of the contract. Credit terms are generally net 30 from the date of invoice. The timing between the satisfaction of performance obligations and when payment is due from the customer is

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generally not significant. The Company records allowances for doubtful trade receivables when it is probable that the balances will not be collected.

Trade receivables, net

The following table shows the components of the Company's Trade receivables, net:

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Trade receivables	\$ 9,983	\$ 12,241
Less: Allowance for doubtful accounts	(39)	(37)
Trade receivables, net	<u>\$ 9,944</u>	<u>\$ 12,204</u>

Cabot Receivable

The following table shows the components of the Cabot Receivable:

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Receivables, net	\$ 1,616	\$ 921
Other long-term assets, net	7,952	8,852
Total Cabot Receivable	<u>\$ 9,568</u>	<u>\$ 9,773</u>

Disaggregation of Revenue and Earnings from Equity Method Investments

For the three and six months ended June 30, 2021 and 2020, all performance obligations related to revenues recognized were satisfied at a point in time. The Company disaggregates its revenues by major components as well as between its two reportable segments, which are further discussed in Note 17 to the Condensed Consolidated Financial Statements. The following tables disaggregate revenues by major component for the three and six months ended June 30, 2021 and 2020 (in thousands):

	Three Months Ended June 30, 2021			Six Months Ended June 30, 2021		
	Segment		Total	Segment		Total
	APT	RC		APT	RC	
Revenue component						
Consumables	\$ 15,976	\$ —	\$ 15,976	\$ 33,007	\$ —	\$ 33,007
License royalties, related party	—	3,657	3,657	—	7,723	7,723
Revenues from customers	15,976	3,657	19,633	33,007	7,723	40,730
Earnings from equity method investments	—	21,437	21,437	—	39,749	39,749
Total revenues from customers and earnings from equity method investments	<u>\$ 15,976</u>	<u>\$ 25,094</u>	<u>\$ 41,070</u>	<u>\$ 33,007</u>	<u>\$ 47,472</u>	<u>\$ 80,479</u>

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	Three Months Ended June 30, 2020			Six Months Ended June 30, 2020		
	Segment		Total	Segment		Total
	APT	RC		APT	RC	
Revenue component						
Consumables	\$ 8,170	\$ —	\$ 8,170	\$ 17,387	\$ —	\$ 17,387
License royalties, related party	—	3,313	3,313	—	6,359	6,359
Revenues from customers	8,170	3,313	11,483	17,387	6,359	23,746
Earnings from equity method investments	—	8,168	8,168	—	16,441	16,441
Total revenues from customers and earnings from equity method investments	\$ 8,170	\$ 11,481	\$ 19,651	\$ 17,387	\$ 22,800	\$ 40,187

**Note 11 - Commitments and Contingencies**

*Legal Proceedings*

The Company is from time to time subject to, and is presently involved in, various pending or threatened legal actions and proceedings, including those that arise in the ordinary course of its business. Such matters are subject to many uncertainties and outcomes, the financial impacts of which are not predictable with assurance and that may not be known for extended periods of time. The Company records a liability in its consolidated financial statements for costs related to claims, settlements, and judgments where management has assessed that a loss is probable and an amount can be reasonably estimated. There were no significant legal proceedings as of June 30, 2021.

*Restricted Cash*

As of June 30, 2021 and December 31, 2020, the Company had short-term restricted cash of \$6.0 million and \$5.0 million, respectively, as required under a minimum cash balance requirement of a Line of Credit covenant, and long-term restricted cash of \$10.0 million and \$5.0 million, respectively, as required under the Surety Agreement.

*Other Commitments and Contingencies*

The Company has certain limited obligations contingent upon future events in connection with the activities of Tinum Group. The Company, NexGen Refined Coal, LLC ("NexGen") and two entities affiliated with NexGen have provided an affiliate of the Goldman Sachs Group, Inc. with limited guaranties (the "Tinum 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 Tinum Group Party Guaranty is entitled to receive contributions from the other party equal to 50% of the amount paid. The Company has not recorded a liability or expense provision related to this contingent obligation as it believes that it is not probable that a loss will occur with respect to the Tinum Group Party Guaranties.

**Note 12 - Stockholders' Equity**

*Stock Repurchase Programs*

In November 2018, the Company's Board of Directors (the "Board") authorized the Company to purchase up to \$20.0 million of its outstanding common stock under a stock repurchase program (the "Stock Repurchase Program"), which was to remain in effect until December 31, 2019 unless otherwise modified by the Board. As of November 2019, \$2.9 million remained outstanding related to the Stock Repurchase Program. In November 2019, the Board authorized an incremental \$7.1 million to the Stock Repurchase Program and provided that it will remain in effect until all amounts are utilized or it is otherwise modified by the Board.

Under the Stock Repurchase Program, for the three and six months ended June 30, 2021, the Company did not repurchase any shares. For the three and six months ended June 30, 2020, the Company purchased zero and 20,613 shares, respectively, of its common stock for cash of zero and \$0.2 million, respectively, inclusive of commissions and fees. As of June 30, 2021, the Company had \$7.0 million remaining under the Stock Repurchase Program.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

Quarterly Cash Dividend

Dividends declared and paid quarterly on all outstanding shares of common stock during the three and six months ended June 30, 2021 and 2020 were as follows:

	2021		2020	
	Per share	Date paid	Per share	Date paid
Dividends declared during quarter ended:				
March 31	\$ —	N/A	\$ 0.25	March 10, 2020
June 30	\$ —	N/A	\$ —	N/A
	\$ —		\$ 0.25	

A portion of the dividends declared remains accrued subsequent to the payment dates and represents dividends accumulated on nonvested shares of common stock held by employees and directors of the Company that contain forfeitable dividend rights that are not payable until the underlying shares of common stock vest. These amounts are included in both Other current liabilities and Other long-term liabilities on the Condensed Consolidated Balance Sheets as of June 30, 2021 and December 31, 2020.

Tax Asset Protection Plan

U.S. federal income tax rules, and Section 382 of the Internal Revenue Code in particular, could substantially limit the use of net operating losses and other tax assets if the Company experiences an "ownership change" (as defined in the Internal Revenue Code). In general, an ownership change occurs if there is a cumulative change in the ownership of the Company by "5 percent stockholders" that exceeds 50 percentage points over a rolling three-year period.

On May 5, 2017, the Board approved the declaration of a dividend of rights to purchase Series B Junior Participating Preferred Stock for each outstanding share of common stock as part of a tax asset protection plan (the "TAPP") designed to protect the Company's ability to utilize its net operating losses and tax credits. The TAPP is intended to act as a deterrent to any person acquiring beneficial ownership of 4.99% or more of the Company's outstanding common stock.

On April 9, 2021, the Board approved the Fourth Amendment to the TAPP ("Fourth Amendment") that amends the TAPP, as previously amended by the First, Second and Third Amendments that were approved the Board on April 6, 2018, April 5, 2019 and April 9, 2020, respectively. The Fourth Amendment amends the definition of "Final Expiration Date" under the TAPP to extend the duration of the TAPP and makes associated changes in connection therewith. At the Company's 2021 annual meeting of stockholders, the Company's stockholders approved the Fourth Amendment, thus the Final Expiration Date will be the close of business on December 31, 2022.

**Note 13 - Stock-Based Compensation**

The Company grants equity-based awards to employees, non-employee directors, and consultants that may include, but are not limited to, RSA's, restricted stock units ("RSU's"), performance stock units ("PSU's") and stock options. Stock-based compensation expense related to manufacturing employees and administrative employees is included within the Cost of revenue and Payroll and benefits line items, respectively, in the Condensed Consolidated Statements of Operations. Stock-based compensation expense related to non-employee directors and consultants is included within the General and administrative line item in the Condensed Consolidated Statements of Operations.

Total stock-based compensation expense for the three and six months ended June 30, 2021 and 2020 was as follows:

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
RSA expense	\$ 511	\$ 975	\$ 918	\$ 1,481
PSU expense	55	163	69	163
Total stock-based compensation expense	\$ 566	\$ 1,138	\$ 987	\$ 1,644

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

The amount of unrecognized compensation cost as of June 30, 2021, and the expected weighted-average period over which the cost will be recognized is as follows:

<i>(in thousands)</i>	As of June 30, 2021	
	Unrecognized Compensation Cost	Expected Weighted- Average Period of Recognition (in years)
RSA expense	\$ 2,736	2.31
PSU expense	490	2.24
Total unrecognized stock-based compensation expense	\$ 3,226	2.30

Restricted Stock

Restricted stock is typically granted with vesting terms of three years. The fair value of RSA's and RSU's is determined based on the closing price of the Company's common stock on the authorization date of the grant multiplied by the number of shares subject to the stock award. Compensation expense for RSA's is generally recognized on a straight-line basis over the entire vesting period.

A summary of RSA activity under the Company's various stock compensation plans for the six months ended June 30, 2021 is presented below:

	Restricted Stock	Weighted-Average Grant Date Fair Value
Non-vested at January 1, 2021	373,860	\$ 7.25
Granted	387,632	\$ 5.28
Vested	(183,700)	\$ 7.45
Forfeited	(31,623)	\$ 5.75
Non-vested at June 30, 2021	546,169	\$ 5.88

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. A summary of PSU activity for the six months ended June 30, 2021 is presented below:

	Units	Weighted- Average Grant Date Fair Value	Aggregate Intrinsic Value (in thousands)	Weighted- Average Remaining Contractual Term (in years)
PSU's outstanding, January 1, 2021	50,127	\$ 6.17		
Granted	62,448	7.09		
Vested / Settled	—	—		
Forfeited / Canceled	—	—		
PSU's outstanding, June 30, 2021	112,575	\$ 6.68	\$ 834	2.24

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

**Note 14 - Supplemental Financial Information**

*Supplemental Balance Sheet Information*

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

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Prepaid expenses and other assets:		
Prepaid expenses	\$ 2,278	\$ 1,690
Prepaid income taxes and income tax refunds	1,723	1,605
Other	1,319	1,302
	\$ 5,320	\$ 4,597
Other long-term assets, net:		
Cabot Receivable (1)	\$ 7,952	\$ 8,852
Upfront Customer Consideration (1)	7,236	7,490
Mine development costs, net	4,837	4,338
Right of use assets, operating leases, net	4,380	1,930
Spare parts, net	4,173	3,727
Mine reclamation asset, net	1,666	1,712
Highview Investment	552	552
Other	1,481	1,388
	\$ 32,277	\$ 29,989

(1) See further discussion of Upfront Customer Consideration in Note 3 and Cabot Receivable in Note 4 and Note 10.

Spare parts include critical spares required to support plant operations. Parts and supply costs are determined using the lower of cost or estimated replacement cost. Parts are recorded as maintenance expenses in the period in which they are consumed.

Mine development costs include acquisition costs, the cost of other development work and mitigation costs related to the Five Forks Mine and are depleted over the estimated life of the related mine reserves. The Company performs an evaluation of the recoverability of the carrying value of mine development costs to determine if facts and circumstances indicate that their carrying value may be impaired and if any adjustment is warranted. There were no indicators of impairment as of June 30, 2021. Mine reclamation asset, net represents an asset retirement obligation ("ARO") asset related to the Five Forks Mine and is depreciated over the estimated life of the Five Forks Mine.

The Company holds a long-term investment (the "Highview Investment") in Highview Enterprises Limited ("Highview"), a UK-based developmental stage company specializing in power storage. The Company accounts for the Highview Investment as an investment recorded at cost, less impairment, plus or minus observable changes in price for identical or similar investments of the same issuer.

The Highview Investment is evaluated for indicators of impairment such as an event or change in circumstances that may have a significant adverse effect on the fair value of the investment. There were no changes to the carrying value of the Highview Investment for the three and six months ended June 30, 2021 as there were no indicators of impairment or observable price changes for identical or similar investments.



**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

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

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
<b>Other current liabilities:</b>		
Current portion of operating lease obligations	\$ 2,342	\$ 1,883
Current portion of mine reclamation liability	6,986	9,370
Income and other taxes payable	2,159	1,305
Other current liabilities	468	438
	\$ 11,955	\$ 12,996
<b>Other long-term liabilities:</b>		
Mine reclamation liabilities	\$ 8,137	\$ 12,077
Operating lease obligations, long-term	2,698	1,109
Other long-term liabilities (1)	557	287
	\$ 11,392	\$ 13,473

(1) Included within Other long-term liabilities is \$0.3 million related to agreements the Company entered into with all of its executive officers and certain other key employees of the organization ("Retention Agreements"). The Retention Agreements are for the benefit of retaining those officers and key employees in order to maintain the Company's current business operations while it pursues and executes on its strategic initiatives. The Retention Agreements with the executive officers were approved by the Compensation Committee of the Board of Directors and the Board of Directors on May 5, 2021. The Company is recognizing expense over the expected service period, which is based on certain conditions outlined in the Retention Agreements.

The Mine reclamation liability related to the Five Forks Mine is included in Other long-term liabilities. The Mine reclamation liability related to Marshall Mine, which was assumed in the Marshall Mine Acquisition, is included in Other current liabilities and Other long-term liabilities. The Mine reclamation liabilities represent AROs. Changes in the AROs were as follows:

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Asset retirement obligation, beginning of period	\$ 21,447	\$ 2,721
Asset retirement obligation assumed	—	21,328
Accretion	661	543
Liabilities settled	(5,043)	(3,565)
Changes due to scope and timing of reclamation	(1,942)	420
Asset retirement obligations, end of period	15,123	21,447
Less current portion	6,986	9,370
Asset retirement obligation, long-term	\$ 8,137	\$ 12,077

As discussed in Note 4, as of June 30, 2021, the Company reduced the Marshall Mine by \$1.9 million based on scope reductions for future reclamation requirements and recorded a corresponding gain on change in estimate for the three and six months ended June 30, 2021.

***Supplemental Condensed Consolidated Statements of Operations Information***

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

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Interest on Senior Term Loan	\$ 52	\$ 484	\$ 207	\$ 1,114
Debt discount and debt issuance costs	355	355	946	709
453A interest	7	28	7	160
Other	79	95	170	189
	\$ 493	\$ 962	\$ 1,330	\$ 2,172



**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

**Note 15 - Impairment**

As of June 30, 2020 and as part of its periodic review of the carrying value of long-lived assets, the Company assessed its long-lived assets for potential impairment. In assessing impairment of its APT segment's and certain other long-lived asset groups, the Company considered factors such as the significant decline in both the APT segment's trailing twelve months revenues and current and future years' forecasted revenues. These factors were largely due to the significant drop in coal-fired power dispatch that began in 2019 amid historically low prices of alternative power generation sources such as natural gas, leading to an increase in natural gas usage as well as other competing energy sources.

As of June 30, 2020, the Company completed an undiscounted cash flow analysis of its APT segment's long-lived assets (the "Asset Group"), which are comprised of its manufacturing plant and related assets and its lignite mine assets, and estimated the undiscounted cash flows from the Asset Group at \$54.7 million, which was less than the carrying value of the Asset Group of \$58.3 million. Accordingly, the Company completed an assessment of the Asset Group's fair value and estimated the fair value of the Asset Group at \$32.2 million. This resulted in an impairment and write-down of the Asset Group (the "Impairment Charge") of \$26.1 million as of June 30, 2020, which is reflected as "Impairment of long-lived assets" in the Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2020.

The following table summarizes the allocation to the Asset Group of the Impairment Charge of \$26.1 million recorded as of June 30, 2020:

*(in thousands)*

Property, plant and equipment, net	\$ 18,986
Intangible assets, net	1,445
Other long-term assets, net	5,672
Total impairment	<u>\$ 26,103</u>

The Company engaged an independent third party to perform the valuation of the Asset Group in order to determine the estimated fair value of the Asset Group. This valuation was based on the use of several established valuation models including an expected future discounted cash flow model based on cash flows expected to be generated by market participants discounted at the risk-free rate of interest. Because of the continued future uncertainty surrounding the level of coal-fired dispatch, the impact of historically low natural gas prices and other estimates impacting the expected future cash flow, it is reasonably possible that the expected future cash flows may change in the near term and may result in the Company recording additional impairment of the Asset Group.

As of June 30, 2021, the Company determined that there was no additional impairment of the Asset Group.

**Note 16 - Income Taxes**

For the three and six months ended June 30, 2021 and 2020, the Company's income tax expense and effective tax rates based on forecasted pretax income were:

<i>(in thousands, except for rate)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Income tax expense	\$ 4,943	\$ 103	\$ 9,432	\$ 461
Effective tax rate	23 %	— %	24 %	(2)%

The effective rate for the three and six months ended June 30, 2021 was higher than the federal statutory rate primarily from the impact of estimated state income taxes.

The Company assesses the valuation allowance recorded against deferred tax assets at each reporting date. The determination of whether a valuation allowance for deferred tax assets is appropriate requires the evaluation of positive and negative evidence that can be objectively verified. Consideration must be given to all sources of taxable income available to realize deferred tax assets, including, as applicable, the future reversal of existing temporary differences, future taxable income forecasts exclusive of the reversal of temporary differences and carryforwards, taxable income in carryback years and tax planning strategies. In estimating income taxes, the Company assesses the relative merits and risks of the appropriate income tax treatment of transactions taking into account statutory, judicial, and regulatory guidance.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
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**Note 17 - 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, to allocate resources and assess financial performance. As of June 30, 2021, the Company's CODM was the Company's CEO. The Company's operating and reportable segments are identified by products and services provided.

As of June 30, 2021, the Company has two reportable segments: (1) Refined Coal ("RC"); and (2) Advanced Purification Technologies ("APT"). Effective December 31, 2020, and as reported in the 2020 Form 10-K, the Company revised its segments to RC and APT, and amounts for the three and six months ended June 30, 2020 have been recast to conform with 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 in the 2020 Form 10-K.
- Segment revenues include equity method earnings and losses from the Company's equity method investments.
- Segment operating income (loss) includes segment revenues and allocation of certain "Corporate general and administrative expenses," which include Payroll and benefits, General and administrative and Depreciation, amortization, depletion and accretion.
- RC segment operating income includes interest expense directly attributable to the RC segment.

As of June 30, 2021 and December 31, 2020, substantially all of the Company's material assets are located in the U.S. and substantially all significant customers are U.S. companies. The following table presents the Company's operating segment results for the three and six months ended June 30, 2021 and 2020:

<i>(in thousands)</i>	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>
<b>Revenues:</b>				
<b>Refined Coal:</b>				
Earnings in equity method investments	\$ 21,437	\$ 8,168	\$ 39,749	\$ 16,441
License royalties, related party	3,657	3,313	7,723	6,359
	<u>25,094</u>	<u>11,481</u>	<u>47,472</u>	<u>22,800</u>
<b>Advanced Purification Technologies:</b>				
Consumables	15,976	8,170	33,007	17,387
	<u>15,976</u>	<u>8,170</u>	<u>33,007</u>	<u>17,387</u>
<b>Total segment reporting revenues</b>	<u>41,070</u>	<u>19,651</u>	<u>80,479</u>	<u>40,187</u>
<b>Adjustments to reconcile to reported revenues:</b>				
Earnings in equity method investments	(21,437)	(8,168)	(39,749)	(16,441)
<b>Total reported revenues</b>	<u>\$ 19,633</u>	<u>\$ 11,483</u>	<u>\$ 40,730</u>	<u>\$ 23,746</u>
<b>Segment operating income (loss):</b>				
Refined Coal	\$ 24,905	\$ 10,777	\$ 47,176	\$ 21,637
Advanced Purification Technologies (1) (2)	258	(29,999)	273	(37,369)
<b>Total segment operating income (loss)</b>	<u>\$ 25,163</u>	<u>\$ (19,222)</u>	<u>\$ 47,449</u>	<u>\$ (15,732)</u>

(1) Included in APT segment operating income (loss) for the three and six months ended June 30, 2021 and 2020 is \$1.8 million and \$3.7 million, \$1.5 million and \$3.8 million, respectively, of depreciation, amortization, depletion and accretion expense on mine and plant long-lived assets and liabilities and \$0.1 million, \$0.3 million, zero and zero, respectively, of amortization of Upfront Customer Consideration.

(2) Included in APT segment operating income for the three and six months ended June 30, 2021 is \$1.9 million gain related to the change in the Marshall Mine ARO as of June 30, 2021.

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
**Notes to Condensed Consolidated Financial Statements**  
*(Unaudited)*

A reconciliation of reportable segment operating income to consolidated income (loss) before income tax expense is as follows:

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Total reported segment operating income (loss)	\$ 25,163	\$ (19,222)	\$ 47,449	\$ (15,732)
Adjustments to reconcile to income (loss) before income (loss) tax expense attributable to the Company:				
Corporate payroll and benefits	(826)	(1,148)	(1,465)	(1,857)
Corporate legal and professional fees	(1,376)	(925)	(3,130)	(2,674)
Corporate general and administrative	(1,049)	(1,558)	(2,225)	(3,157)
Corporate depreciation and amortization	(122)	(163)	(276)	(189)
Corporate interest expense, net	(348)	(824)	(998)	(1,766)
Other income, net	91	129	404	129
Income (loss) before income tax expense	<u>\$ 21,533</u>	<u>\$ (23,711)</u>	<u>\$ 39,759</u>	<u>\$ (25,246)</u>

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

A reconciliation of reportable segment assets to consolidated assets is as follows:

<i>(in thousands)</i>	As of	
	June 30, 2021	December 31, 2020
Assets:		
Refined Coal (1)	\$ 7,427	\$ 11,516
Advanced Purification Technologies (2)	81,775	80,877
Total segment assets	89,202	92,393
All Other and Corporate (3)	69,293	54,278
Consolidated	<u>\$ 158,495</u>	<u>\$ 146,671</u>

(1) Includes \$3.6 million and \$7.7 million of investments in equity method investees as of June 30, 2021 and December 31, 2020, respectively.

(2) Includes \$37.0 million and \$34.6 million of long-lived assets, net.

(3) Includes the Company's deferred tax assets of \$3.8 million and \$10.6 million as of June 30, 2021 and December 31, 2020, respectively.

**Note 18 - Fair Value Measurements**

*Fair value of financial instruments*

The carrying amounts of financial instruments, including cash, cash equivalents and restricted cash, accounts receivable, accounts payable and accrued expenses, approximate fair value due to the short maturity of these instruments. The carrying amounts of the Cabot Receivable and debt obligations approximate fair value based on credit terms and market interest rates currently available for similar instruments. Accordingly, these instruments are not presented in the table below. The following table provides the estimated fair values of the remaining financial instruments:

<i>(in thousands)</i>	As of June 30, 2021		As of December 31, 2020	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Financial Instruments:				
Highview Investment	\$ 552	\$ 552	\$ 552	\$ 552
Highview Obligation	\$ 233	\$ 233	\$ 228	\$ 228

*Concentration of credit risk*

The Company's financial instruments that are exposed to concentrations of credit risk consist primarily of cash and cash equivalents. The Company holds cash and cash equivalents at four financial institutions as of June 30, 2021. If an institution

**Advanced Emissions Solutions, Inc. and Subsidiaries**  
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was unable to perform its obligations, the Company would be at risk regarding the amount of cash and investments in excess of the Federal Deposit Insurance Corporation limits (currently \$250 thousand) that would be returned to the Company.

*Assets and Liabilities Measured at Fair Value on a Recurring Basis*

As of June 30, 2021 and December 31, 2020, the Company had no financial instruments carried and measured at fair value on a recurring basis.

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

As disclosed in Note 14, the Company accounts for the Highview Investment as an investment recorded at cost, less impairment, plus or minus observable changes in price for identical or similar investments of the same issuer. Fair value measurements, if any, represent either Level 2 or Level 3 measurements.

**Note 19 - Subsequent Events**

All significant matters that occurred subsequent to June 30, 2021 are disclosed elsewhere within the notes to the Condensed Consolidated Financial Statements.

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

The following discussion and analysis of our financial condition and results of our operations should be read together with the unaudited Condensed Consolidated Financial Statements and notes of Advanced Emissions Solutions, Inc. ("ADES" or the "Company") included elsewhere in Item 1 of Part I of this Quarterly Report and with the audited consolidated financial statements and the related notes of ADES included in the 2020 Form 10-K.

The results of operations discussed in this "Management's Discussion and Analysis of Financial Condition and Results of Operations" are those of Advanced Emissions Solutions, Inc. ("ADES") and its consolidated subsidiaries, collectively, the "Company", "we", "our" or "us".

### **Overview**

We operate two segments: RC and APT. Our RC segment is comprised of our equity ownership in Tinum Group and Tinum Services, both of which are unconsolidated entities in which we generate substantial earnings. Tinum Group provides reduction of mercury and NOx emissions at select coal-fired power generators through the production and sale of RC that qualifies for Section 45 tax credits under IRC Section 45. We benefit from Tinum Group's production and sale of RC, which generates tax credits, as well as its revenue from selling or leasing RC facilities to tax equity investors. We also earn royalties for technologies that we license to Tinum Group and are used at certain RC facilities to enhance combustion and reduced emissions of NOx and mercury from coal burned to generate electrical power. Tinum Services operates and maintains the RC facilities under operating and maintenance agreements with Tinum Group and owners or lessees of the RC facilities. Both Tinum Group and Tinum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021. During the second quarter of 2021, Tinum Group ceased operating an RC facility, with the remaining RC facilities expected to cease operations during the second half of 2021. As such, our earnings and distributions from our RC segment will substantially cease as of December 31, 2021.

Our APT segment is primarily operated through a wholly-owned subsidiary, Carbon Solutions. We sell consumable products that utilize AC and chemical based technologies to a broad range of customers, including coal-fired utilities, industrials, water treatment plants, and other diverse markets through the customer supply agreement defined below. Our primary products are comprised of AC, which is produced from lignite coal. Our AC products include both powdered activated carbon ("PAC") and granular activated carbon ("GAC"). Our proprietary technologies and associated product offerings provide purification solutions to enable our customers to reduce certain contaminants and pollutants to meet the challenges of existing and potential regulations. Additionally, we own an associated lignite mine that supplies the primary raw material for manufacturing our products.

### **Drivers of Demand and Key Factors Affecting Profitability**

Drivers of demand and key factors affecting our profitability differ by segment. In the RC segment, demand has been driven primarily from investors who purchase or lease RC facilities that qualify under the Section 45 tax credit period, which is expected to expire no later than December 31, 2021. Operating results in RC are affected by: (1) the ability to lease or operate RC facilities; (2) lease renegotiation or termination; and (3) changes in tonnage of RC due to changing coal-fired dispatch and electricity power generation sources. As discussed above, earnings and distributions from our RC segment will substantially cease as of December 31, 2021 as Tinum ceases operations at its RC facilities.

In the APT segment, demand is driven primarily by consumables-based solutions for coal-fired power generation and other industrials, municipal water customers, and since September 30, 2020, demand from Cabot's customers through the Supply Agreement discussed below. Operating results in the APT segment has been influenced by: (1) changes in our sales volumes; (2) changes in price and product mix; and (3) changes in coal-fired dispatch and electricity power generation sources.

On April 22, 2021, there was an incident at our Red River Plant in Louisiana ("Plant Incident"), which involved an isolated fire in one of the Red River Plant's coal handling systems. As a result, the Red River Plant was shut down for nine days for repair. As of June 30, 2021, the cash flow impact associated with the Plant Incident was \$0.2 million for repairs and \$0.7 million in purchased inventory to supplement lost production.

### **Customer Supply Agreement**

On September 30, 2020, we and Cabot entered into the Supply Agreement pursuant to which we agreed to sell and deliver to Cabot, and Cabot agreed to purchase and accept from us, Furnace Products. In addition to the sale by us and purchase by Cabot of Furnace Products, we and Cabot have agreed to additional terms whereby Cabot will reimburse us for certain capital expenditures incurred by us that are necessary to manufacture the Furnace Products. Reimbursements will be in the form of

revenues earned from capital expenditures incurred that will benefit both us and Cabot (referred to as "Shared Capital") and capital expenditures incurred that will benefit Cabot exclusively (referred to as "Specific Capital").

For 2021, we have generated material incremental volume and lowered unit operating costs at the Red River Plant due to the Supply Agreement, which in turn has increased our gross margins. Further, the Supply Agreement has further expanded our AC products to diverse end-markets that are outside of coal-fired power generation.

### **Acquisition of Marshall Mine**

Concurrently with the execution of the Supply Agreement, on September 30, 2020, we entered into the Mine Purchase Agreement with Cabot to purchase 100% of the membership interests in Marshall Mine, LLC (the "Marshall Mine Acquisition") for a nominal cash purchase price. Marshall Mine, LLC owns a lignite mine located outside of Marshall, Texas (the "Marshall Mine"). We independently determined to immediately commence activities to shutter the Marshall Mine and have and will continue to incur the associated reclamation costs.

In conjunction with the execution of the Supply Agreement and the Mine Purchase Agreement, on September 30, 2020, we entered into the Reclamation Contract with a third party that provides a capped cost, subject to certain contingencies, in the amount of approximately \$19.7 million plus an obligation to pay certain direct costs estimated to be \$3.6 million (collectively, the "Reclamation Costs") over the estimated reclamation period of 10 years. We are accounting for this obligation as an asset retirement obligation under U.S. GAAP ("ARO"). Under the terms of the Supply Agreement, Cabot is obligated to reimburse us for \$10.2 million of Reclamation Costs (the "Reclamation Reimbursements"), which are payable semi-annually over 13 years and inclusive of interest. For the three and six months ended June 30, 2021, we settled \$2.7 million and \$5.0 million in of Reclamation Costs, respectively.

As the owner of the Marshall Mine, we were required to post a surety bond with a third party to ensure performance of our reclamation activities in the amount of \$30.0 million under the Surety Agreement. On June 7, 2021, the third party agreed to reduce the Surety Bond amount to \$16.6 million. As of June 30, 2021, we were required to post collateral of \$10.0 million in the form of restricted cash for the obligations due under the Reclamation Contract.

As of June 30, 2021, we revised our estimate of future obligations owed for reclamation of the Marshall Mine primarily based on scope reductions related to future reclamation requirements. As a result, we reduced the Marshall Mine ARO by \$1.9 million as of June 30, 2021 and a recorded a corresponding gain on change in estimate in the Condensed Consolidated Statements of Operations for the three and six months ended June 30, 2021.

### **Impact of COVID-19**

In March 2020, the World Health Organization declared COVID-19 a global pandemic. We are designated by CISA of the Department of Homeland Security as a critical infrastructure supplier to the energy sector. Our operations have been deemed essential and, therefore, our facilities remained open and our employees employed. We follow the COVID-19 guidelines from the Centers for Disease Control concerning the health and safety of our personnel. The measures we have taken have resulted in an increase in our personnel costs, operational inefficiencies and the incurrence of incremental costs to allow manufacturing operations to continue.

The duration and scope of the COVID-19 pandemic continues to be uncertain. Many parts of the world are still experiencing high infection rates and the level and timing of COVID-19 vaccine distribution will impact the economic recovery and growth. We cannot predict the long-term effects on our business, including our financial position or results of operations, if governmental restrictions or other such directives continue for a prolonged period of time and cause a material negative change in power generation demand, materially disrupt our supply chain, substantially increase our operating costs or limit our ability to serve existing customers and seek new customers.

In response to the COVID-19 outbreak, in March 2020, the federal government passed the CARES Act. The CARES Act provided, among other things, the deferral of payroll tax payments for all payroll taxes incurred through December 31, 2020 and created the Paycheck Protection Program ("PPP"), which is sponsored and administered by the SBA. In June 2020, the Paycheck Protection Program Flexibility Act of 2020 (the "PPFPA") was signed into law and established the payment dates in the event that amounts borrowed under the PPP are not forgiven. See further discussion below of the loan made to us under the PPP under the section "PPP Loan" under this Item.

We elected to defer payments of payroll taxes for the periods allowed under the CARES Act and will repay 50% by December 31, 2021 and 50% by December 31, 2022. As of June 30, 2021, total payroll tax payments deferred under the CARES Act were \$0.4 million.

Our customers may also be impacted by COVID-19 pandemic as the utilization of energy has changed. We cannot predict the long-term impact on our customers and the subsequent impact on our business.

## Results of Operations

For the three and six months ended June 30, 2021, we recognized net income of \$16.6 million and \$30.3 million, respectively, compared to net loss of \$23.8 million and \$25.7 million for the three and six months ended June 30, 2020.

The following sections provide additional information regarding these comparable 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 June 30, 2021 and 2020

#### Total Revenue and Cost of Revenue

A summary of the components of our revenues and cost of revenue for the three months ended June 30, 2021 and 2020 is as follows:

<i>(in thousands, except percentages)</i>	Three Months Ended June 30,		Change	
	2021	2020	(\$)	(%)
<b>Revenues:</b>				
Consumables	\$ 15,976	\$ 8,170	\$ 7,806	96 %
License royalties, related party	3,657	3,313	344	10 %
Total revenues	<u>\$ 19,633</u>	<u>\$ 11,483</u>	<u>\$ 8,150</u>	71 %
<b>Operating expenses:</b>				
Consumables cost of revenue, exclusive of depreciation and amortization	\$ 13,300	\$ 7,416	\$ 5,884	79 %

#### Consumables and consumables cost of revenue

For the three months ended June 30, 2021, consumables revenues increased from the comparable quarter in 2020 primarily driven by higher product volumes, most significantly from products sold under the Supply Agreement, which comprised of \$7.4 million of total revenues, and provided favorable pricing mix of approximately \$0.6 million. Negatively impacting revenues quarter over quarter was less favorable product mix of approximately \$0.2 million. For the three months ended June 30, 2021, there were higher than average temperatures as well as an increase in natural gas prices compared to the prior quarter, both of which caused an increase in demand for our products.

Our gross margin, exclusive of depreciation and amortization, increased for the three months ended June 30, 2021 compared to the corresponding quarter in 2020 primarily due to the higher product volumes, which resulted in lower fixed cost per pound compared to the corresponding quarter. Offsetting higher gross margin from higher product volumes for the three months ended June 30, 2021, was gross margin negatively impacted by routine scheduled maintenance outages planned during the second quarter of 2021 as well as additional costs associated with the Plant Incident. The impact of the Plant Incident is expected to continue for the remainder of 2021 as we continue to purchase inventory due to lost production and increased demand for our products.

We expect Consumable revenues and gross margin to be positively impacted by our price increase announced in the second quarter of 2021 along with our efforts to improve customer and product mix. The price increase will also help offset the increase in operating costs.

Consumables revenues continues to be affected by electricity demand driven by seasonal weather and related power generation needs, as well as competitor prices related to alternative power generation sources such as natural gas. According to data provided by the U.S. Energy Information Administration ("EIA"), for the three months ended June 30, 2021, power generation from coal-fired power dispatch increased approximately 34% compared to the corresponding quarter in 2020.

### License royalties, related party

For the three months ended June 30, 2021 and 2020, there were 12.8 million tons and 9.2 million tons, respectively, of RC produced using M-45™ and M-45-PC™ technologies ("M-45 Technology"), which Tinnuum Group licenses from us ("M-45 License"). M-45 License royalties increased for the three months ended June 30, 2021 primarily from higher tonnage compared to the three months ended June 30, 2020. This was primarily a result of an increase quarter over quarter in RC facilities that use the M-45 Technology. While tonnage increased quarter over quarter, there was a reduction in the royalty rate per ton primarily attributable to a majority of the RC contracts having fixed lease payments such that increased tonnages did not result in increased earnings. Both Tinnuum Group and Tinnuum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021. As such, we do not expect to continue earning M-45 License royalties after December 31, 2021.

Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the Business Segments discussion and in Note 17 to the Condensed Consolidated Financial Statements.

### **Other Operating Expenses**

A summary of the components of our operating expenses for the three months ended June 30, 2021 and 2020, exclusive of cost of revenue items (presented above), is as follows:

<i>(in thousands, except percentages)</i>	<b>Three Months Ended June 30,</b>		<b>Change</b>	
	<b>2021</b>	<b>2020</b>	<b>(\$)</b>	<b>(%)</b>
<b>Operating expenses:</b>				
Payroll and benefits	\$ 2,908	\$ 3,812	\$ (904)	(24)%
Legal and professional fees	1,431	1,022	409	40 %
General and administrative	1,593	2,462	(869)	(35)%
Depreciation, amortization, depletion and accretion	1,904	1,733	171	10 %
Impairment of long-lived assets	—	26,103	(26,103)	(100)%
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	*
	<u>\$ 5,894</u>	<u>\$ 35,132</u>	<u>\$ (29,238)</u>	<u>(83)%</u>

\* Calculation not meaningful

### Payroll and benefits

Payroll and benefits expenses, which represent costs related to selling, general and administrative personnel, decreased for the three months ended June 30, 2021 compared to the corresponding quarter in 2020 primarily due to a decrease in payroll-related expenses of executives and changes in personnel mix. Offsetting these decreases was an increase in our headcount and expense related to the agreements with our executive officers and certain other key employees ("Retention Agreements"). See below for additional information on the Retention Agreements.

### Legal and professional fees

Legal and professional fees increased for the three months ended June 30, 2021 compared to the corresponding quarter in 2020 as a result of costs incurred related to our strategic alternatives, including consulting and legal fees of \$0.4 million.

### General and administrative

General and administrative expenses decreased for the three months ended June 30, 2021 compared to the corresponding quarter in 2020 primarily due to a reduction of product development costs of \$0.4 million and a reduction in costs incurred due to the sequestration of certain of our employees at our manufacturing plant in Louisiana of approximately \$0.3 million during the three months ended June 30, 2020. Offsetting these decreases were increases in rent and occupancy expenses of approximately \$0.1 million related to property taxes.

### Depreciation, amortization, depletion and accretion

Depreciation and amortization expense increased for the three months ended June 30, 2021 compared to the corresponding quarter in 2020 due to higher production volumes during the three months ended June 30, 2021, resulting in \$0.4 million more absorption of depreciation in inventory. Further driving the increase was accretion expense of \$0.3 million related to the Marshall Mine ARO. Offsetting this increase was a reduction in depreciation and amortization expense of \$0.6 million related to the Impairment Charge recorded in the second quarter of 2020 that reduced the carrying value of our property, plant, equipment and intangibles.



### Impairment of long-lived assets

As previously discussed, as of June 30, 2020, we recorded the Impairment Charge of \$26.1 million, which is included in the Condensed Consolidated Statements of Operations for the three months ended June 30, 2020.

### Gain on change in estimate, asset retirement obligation

As previously discussed, we recorded a gain on change in estimate of \$1.9 million related to a reduction in scope of our future reclamation efforts of the Marshall Mine, which is included in the Condensed Consolidated Statements of Operations for the three months ended June 30, 2021.

### **Other Income (Expense), net**

A summary of the components of other income (expense), net for the three months ended June 30, 2021 and 2020 is as follows:

<i>(in thousands, except percentages)</i>	<b>Three Months Ended June 30,</b>		<b>Change</b>	
	<b>2021</b>	<b>2020</b>	<b>(\$)</b>	<b>(%)</b>
<b>Other income (expense):</b>				
Earnings from equity method investments	\$ 21,437	\$ 8,168	\$ 13,269	162 %
Interest expense	(493)	(962)	469	(49)%
Other	150	148	2	1 %
<b>Total other income</b>	<b>\$ 21,094</b>	<b>\$ 7,354</b>	<b>\$ 13,740</b>	<b>187 %</b>

### Earnings from equity method investments

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

<i>(in thousands)</i>	<b>Three Months Ended June 30,</b>	
	<b>2021</b>	<b>2020</b>
Earnings from Tinnium Group	\$ 19,125	\$ 6,764
Earnings from Tinnium Services	2,312	1,404
Earnings from other	—	—
Earnings from equity method investments	<u>\$ 21,437</u>	<u>\$ 8,168</u>

Earnings from equity method investments, and changes related thereto, are impacted by our significant equity method investees: Tinnium Group and Tinnium Services.

For the three months ended June 30, 2021, we recognized \$19.1 million in equity earnings from Tinnium Group compared to our proportionate share of Tinnium Group's net income of \$12.1 million for the quarter. The difference between our pro-rata share of Tinnium Group's net income and our earnings from Tinnium Group equity method investment as reported on the Condensed Consolidated Statements of Operations is the result of cumulative distributions received from Tinnium Group being in excess of the carrying value of the investment, and therefore we recognize such excess distributions as equity method earnings in the period the distributions occur.

For the three months ended June 30, 2020, we recognized \$6.8 million in equity earnings from Tinnium Group, which was equal to our proportionate share of Tinnium Group's net income for the respective quarter.

See further discussion of quarter over quarter changes in Earnings from Equity Investments in "Business Segments" under this Item. Additional information related to equity method investments is included in Note 6 to the Condensed Consolidated Financial Statements included in Part I - Item 1 of this Report.

For 2021, we expect to recognize such excess contributions as equity method earnings in the period the distributions occur, limited to the carrying value of the Tinnium Group equity investment.

### Interest expense

For the three months ended June 30, 2021, interest expense decreased \$0.5 million compared to the three months ended June 30, 2020 primarily due to a reduction in interest expense related to the Senior Term Loan, as the principal balance was reduced from payments of \$28.0 million made during the period from June 30, 2020 to June 30, 2021. Further, the Senior Term Loan was paid-off in its entirety as of June 1, 2021. The remaining decrease in interest expense related to reductions in finance lease liabilities and the deferred tax liability associated with Internal Revenue Code section 453A ("Section 453A") during the period from June 30, 2020 to June 30, 2021. Section 453A requires taxpayers to pay an interest charge ("453A interest") on the portion of the tax liability that is deferred under the installment method for tax purposes.

### **Income tax expense**

For the three months ended June 30, 2021, we recorded income tax expense of \$4.9 million compared to income tax expense of \$0.1 million for the three months ended June 30, 2020. The income tax expense recorded for the three months ended June 30, 2021 was comprised of estimated federal income tax expense of \$5.0 million and estimated state income tax benefit of \$0.1 million. The income tax expense recorded for the three months ended June 30, 2020 was comprised of estimated federal income tax expense of \$0.3 million and estimated state income tax benefit of \$0.2 million.

The increase in income tax expense quarter over quarter was primarily due to pretax income for the three months ended June 30, 2021 of \$21.5 million compared to a pretax loss for the three months ended June 30, 2020 of \$23.7 million.

### **Comparison of the Six Months Ended June 30, 2021 and 2020**

#### **Total Revenue and Cost of Revenue**

A summary of the components of our revenues and cost of revenue for the six months ended June 30, 2021 and 2020 is as follows:

<i>(in thousands, except percentages)</i>	<b>Six Months Ended June 30,</b>		<b>Change</b>	
	<b>2021</b>	<b>2020</b>	<b>(\$)</b>	<b>(%)</b>
<b>Revenues:</b>				
Consumables	\$ 33,007	\$ 17,387	\$ 15,620	90 %
License royalties, related party	7,723	6,359	1,364	21 %
<b>Total revenues</b>	<b>\$ 40,730</b>	<b>\$ 23,746</b>	<b>\$ 16,984</b>	<b>72 %</b>
<b>Operating expenses:</b>				
Consumables cost of revenue, exclusive of depreciation and amortization	\$ 25,774	\$ 18,907	\$ 6,867	36 %

### Consumables and consumables cost of revenue

For the six months ended June 30, 2021, consumables revenues increased from the comparable period in 2020 primarily driven by higher product volumes, most significantly from products sold under the Supply Agreement, which comprised of approximately \$14.5 million of total revenue and favorable price impact of approximately \$2.8 million. Negatively impacting consumables revenues period over period was less favorable product mix, which impacted consumables revenue by approximately \$1.7 million.

Volumes were positively impacted by seasonal weather and an increase of 4.4% in overall power generation, including an increase in power generation from coal-fired power dispatch, which according to data provided by the EIA, increased approximately 36% for the six months ended June 30, 2021 compared to the corresponding period in 2020.

Our gross margin, exclusive of depreciation and amortization, increased for the six months ended June 30, 2021 compared to the corresponding period in 2020 primarily due to the higher product volumes, which resulted in lower fixed cost per pound compared to the prior year. Offsetting higher gross margin from higher product volumes for the six months ended June 30, 2021, was gross margin negatively impacted by additional costs associated with the Plant Incident.

Consumables cost of revenue was negatively impacted for the six months ended June 30, 2020 due to safety actions taken by us to provide for continued operation of our manufacturing facilities in response to COVID-19.

### License royalties, related party

For the six months ended June 30, 2021 and 2020, there were 27.5 million tons and 21.1 million tons, respectively, of RC produced using the M-45 Technology under the M-45 License. While tonnage increased period over period, there was a reduction in the royalty rate per ton primarily attributable to a majority of the RC contracts having fixed lease payments such that increased tonnages did not result in increased earnings.

Additional information related to revenue concentrations and contributions by class and reportable segment can be found within the segment discussion below and in Note 17 to the Condensed Consolidated Financial Statements.

### **Other Operating Expenses**

A summary of the components of our operating expenses, exclusive of cost of revenue items (presented above), for the six months ended June 30, 2021 and 2020 is as follows:

<i>(in thousands, except percentages)</i>	<b>Six Months Ended June 30,</b>		<b>Change</b>	
	<b>2021</b>	<b>2020</b>	<b>(\$)</b>	<b>(%)</b>
<b>Operating expenses:</b>				
Payroll and benefits	\$ 5,377	\$ 6,554	\$ (1,177)	(18)%
Legal and professional fees	3,234	3,065	169	6 %
General and administrative	3,508	4,793	(1,285)	(27)%
Depreciation, amortization, depletion and accretion	4,010	4,030	(20)	— %
Impairment of long-lived assets	—	26,103	(26,103)	(100)%
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	*
	<u>\$ 14,187</u>	<u>\$ 44,545</u>	<u>\$ (30,358)</u>	<u>(68)%</u>

\* Calculation not meaningful

### Payroll and benefits

Payroll and benefits expenses decreased for the six months ended June 30, 2021 compared to the same period in 2020 primarily due to a decrease in payroll-related expenses of executive and changes in personnel mix. Offsetting these increases were an increase in our headcount and expense related to the Retention Agreements.

### Legal and professional fees

Legal and professional fees increased for the six months ended June 30, 2021 compared to the same period in 2020 primarily due to costs incurred related to our corporate incentives and strategic alternatives, including consulting and legal fees of \$0.5 million. Offsetting this increase was a reduction in outsourced IT costs specific to the completion of the integration of Carbon Solutions of \$0.4 million.

### General and administrative

General and administrative expenses decreased for the six months ended June 30, 2021 compared to the same period in 2020 primarily due to a decrease in product development expenses of approximately \$0.8 million related to the Supply Agreement, a decrease in costs incurred due to the sequestration of certain of our employees at the Red River Plant of approximately \$0.3 million and reductions in general and administrative expenses, including recruiting and licenses and fees. Offsetting these decreases was an increase in rent and occupancy expenses of approximately \$0.2 million related to property taxes.

### Depreciation and amortization

Depreciation and amortization expense remained relatively flat for the six months ended June 30, 2021 compared to the same period in 2020 due to higher production volumes during the six months ended June 30, 2021, resulting in \$0.4 million more absorption of depreciation in inventory. Further driving the increase was accretion expense of \$0.6 million related to the Marshall Mine ARO. Offsetting these increases was a reduction in depreciation and amortization expense of \$1.0 million related to the Impairment Charge recorded in the second quarter of 2020 that reduced the carrying value of our property, plant, equipment and intangibles.

### Impairment of long-lived assets

As previously discussed, as of June 30, 2020, we recorded the Impairment Charge of \$26.1 million, which is included in the Condensed Consolidated Statements of Operations for the six months ended June 30, 2020.

### Gain on change in estimate, asset retirement obligation

As previously discussed, we recorded a gain on change in estimate of \$1.9 million related to a reduction in scope of our future reclamation efforts of the Marshall Mine, which is included in the Condensed Consolidated Statements of Operations for the six months ended June 30, 2021.

### **Other Income (Expense), net**

A summary of the components of our other income (expense), net for the six months ended June 30, 2021 and 2020 is as follows:

<i>(in thousands, except percentages)</i>	<b>Six Months Ended June 30,</b>		<b>Change</b>	
	<b>2021</b>	<b>2020</b>	<b>(\$)</b>	<b>(%)</b>
<b>Other income (expense):</b>				
Earnings from equity method investments	\$ 39,749	\$ 16,441	\$ 23,308	142 %
Interest expense	(1,330)	(2,172)	842	(39)%
Other	571	191	380	199 %
<b>Total other income</b>	<b>\$ 38,990</b>	<b>\$ 14,460</b>	<b>\$ 24,530</b>	<b>170 %</b>

### Earnings from equity method investments

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

<i>(in thousands)</i>	<b>Six Months Ended June 30,</b>	
	<b>2021</b>	<b>2020</b>
Earnings from Tinuum Group	\$ 35,487	\$ 13,202
Earnings from Tinuum Services	4,262	3,242
Earnings (loss) from other	—	(3)
Earnings from equity method investments	<u>\$ 39,749</u>	<u>\$ 16,441</u>

As of June 30, 2021 and 2020, Tinuum Group had 22 and 20 invested RC facilities, respectively, that were generating revenues.

For the six months ended June 30, 2021, we recognized \$35.5 million in equity earnings from Tinuum Group compared to our proportionate share of Tinuum Group's net income of \$22.9 million for the period. The difference between our pro-rata share of Tinuum Group's net income and our earnings from Tinuum Group equity method investment as reported on the Condensed Consolidated Statements of Operations is the result of cumulative distributions received from Tinuum Group being in excess of the carrying value of the investment, and therefore we recognize such excess distributions as equity method earnings in the period the distributions occur. For the six months ended June 30, 2020, we recognized \$13.2 million in equity earnings from Tinuum Group, which was equal to our proportionate share of Tinuum Group's net income for the respective quarter.

See further discussion of period over period changes in Earnings from Equity Investments in "Business Segments" under this Item. Additional information related to equity method investments is included in Note 6 to the Condensed Consolidated Financial Statements included in Part I - Item 1 of this Report.

### Interest expense

For the six months ended June 30, 2021, interest expense decreased \$0.8 million compared to the six months ended June 30, 2020 primarily due to interest expense incurred in the six months ended June 30, 2021 related to the Senior Term Loan, as the principal balance was reduced from payments of \$28.0 million made during the period from June 30, 2020 to June 30, 2021. The remaining decrease in interest expense related to lower 453A interest from a reduction in the deferred balance related to Section 453A during the period from June 30, 2020 to June 30, 2021.

### **Income tax expense**

For the six months ended June 30, 2021, we recorded income tax expense of \$9.4 million compared to income tax expense of \$0.5 million for the six months ended June 30, 2020. The income tax expense recorded for the six months ended June 30, 2021 was comprised of estimated federal income tax expense of \$9.1 million and state income tax expense of \$0.3 million. The income tax expense recorded for the six months ended June 30, 2020 was comprised of estimated federal income tax expense of \$0.5 million.

The increase in income tax expense period over period was primarily due to pretax income for the six months ended June 30, 2021 of \$39.8 million compared to a pretax loss for the six months ended June 30, 2020 of \$25.2 million.

### **Non-GAAP Financial Measures**

To supplement our financial information presented in accordance with U.S. GAAP (or "GAAP"), we are providing non-GAAP measures of certain financial performance. These non-GAAP measures include Consolidated EBITDA, Consolidated Adjusted EBITDA, RC Segment EBITDA, RC Segment Adjusted EBITDA, APT Segment EBITDA and APT Segment Adjusted EBITDA. We have included these non-GAAP measures because management believes that they help to facilitate period to period comparisons of our operating results. We believe the non-GAAP measures provide useful information to both management and users of the financial statements by excluding certain expenses, gains and losses that may not be indicative of core operating results and business outlook. Management uses these non-GAAP measures in evaluating the performance of our business.

These non-GAAP measures are not in accordance with, or an alternative to, measures prepared in accordance with GAAP and may be different from non-GAAP measures used by other companies. In addition, these non-GAAP measures are not based on any comprehensive set of accounting rules or principles. These measures should only be used to evaluate our results of operations in conjunction with the corresponding GAAP measures.

We define Consolidated EBITDA as net income adjusted for the impact of the following items that are either non-cash or that we do not consider representative of our ongoing operating performance: depreciation, amortization, depletion, accretion, amortization of upfront customer consideration that was recorded as a component of the Marshall Mine Acquisition ("Upfront Customer Consideration"), interest expense, net and income tax expense. We define Consolidated Adjusted EBITDA as Consolidated EBITDA reduced by the non-cash impact of equity earnings from equity method investments and gain on change in estimate, asset retirement obligation and increased by cash distributions from equity method investments and impairment of long-lived assets. Because Consolidated Adjusted EBITDA omits certain non-cash items, we believe that the measure is less susceptible to variances that affect our operating performance.

We define APT Segment EBITDA (loss) as APT Segment Operating Income (loss) adjusted for the impact of the following items that are either non-cash or that we do not consider representative of our ongoing operating performance: depreciation, amortization, depletion, accretion and interest expense, net and amortization of Upfront Customer Consideration. We define APT Segment Adjusted EBITDA (loss) as APT Segment EBITDA (loss) reduced by gain on settlement and gain on change in estimate, asset retirement obligation and increased by impairment of long-lived assets. There were no additional adjustments made to APT Segment Adjusted EBITDA (loss) for the three and six months ended June 30, 2021.

We define RC Segment EBITDA as RC Segment operating income adjusted for the impact of the following items that are either non-cash or that we do not consider representative of our ongoing operating performance: depreciation, amortization, depletion, accretion and interest expense. We define RC Segment Adjusted EBITDA as RC Segment EBITDA reduced by the non-cash impact of equity earnings from equity method investments and increased by cash distributions from equity method investments. When used in conjunction with GAAP financial measures, we believe these non-GAAP measures are supplemental measures of operating performance that explain our operating performance for our period to period comparisons and against our competitors' performance. Generally, we believe these non-GAAP measures are less susceptible to variances that affect our operating performance results.

We expect the adjustments to Consolidated Adjusted EBITDA and APT Segment Adjusted EBITDA in future periods will be generally similar. These non-GAAP measures have limitations as analytical tools, and should not be considered in isolation or as a substitute for analyzing our results as reported under GAAP.

## Consolidated EBITDA and Adjusted EBITDA

<i>(in thousands)</i>	Three Months Ended June 30,		Six Months Ended June 30,	
	2021	2020	2021	2020
Net income (loss)	\$ 16,590	\$ (23,814)	\$ 30,327	\$ (25,707)
Depreciation, amortization, depletion and accretion	1,904	1,733	4,010	4,030
Amortization of Upfront Customer Consideration	127	—	254	—
Interest expense, net	434	945	1,163	2,113
Income tax expense	4,943	103	9,432	461
Consolidated EBITDA (loss)	23,998	(21,033)	45,186	(19,103)
Cash distributions from equity method investees	20,625	15,400	43,876	32,516
Equity earnings	(21,437)	(8,168)	(39,749)	(16,441)
Gain on change in estimate, asset retirement obligation	(1,942)	—	(1,942)	—
Impairment	—	26,103	—	26,103
Consolidated Adjusted EBITDA	\$ 21,244	\$ 12,302	\$ 47,371	\$ 23,075

## Business Segments

As of June 30, 2021, we have two reportable segments: (1) RC and (2) APT. The business segment measurements provided to and evaluated by our chief operating decision maker are computed in accordance with the principles listed below:

- The accounting policies of the operating segments are the same as those described in the summary of significant accounting policies in the 2020 Form 10-K.
- Segment revenues include equity method earnings and losses from our equity method investments.
- Segment operating income (loss) includes segment revenues and allocation of certain "Corporate general and administrative expenses," which include Payroll and benefits, Rent and occupancy, Legal and professional fees, and General and administrative.
- RC segment operating income includes interest expense directly attributable to the RC segment.

The principal products and services of our segments are:

1. RC - Our RC segment derives its earnings from equity method investments as well as royalty payment streams and other revenues related to enhanced combustion of and reduced emissions of both NO<sub>x</sub> and mercury from the burning of coal. Our equity method investments related to the RC segment primarily include Tinum Group and Tinum Services. Segment revenues include our equity method earnings (losses) from our equity method investments and M-45 License royalties earned from Tinum Group. These earnings are included in the Earnings from equity method investments and License royalties, related party line items in the Condensed Consolidated Statements of Operations. Key drivers to the RC segment performance are the produced and sold RC from both operating and retained RC facilities, royalty-bearing tonnage and the number of operating (leased or sold) and retained RC facilities. These key drivers impact our earnings and cash distributions from equity method investments. Both Tinum Group and Tinum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021. As such, our earnings and distributions from our RC segment will substantially cease as of December 31, 2021.
2. APT - Our APT segment includes revenues and related expenses from the sale of our AC and chemical products, which are used to purify coal-fired utilities, industrials, water treatment plants, and other markets. For the purification of air and gases, one of the uses of AC is to reduce mercury emissions and other air contaminants, specifically at coal-fired power generators and other industrial companies. These amounts are included within the Consumables and respective cost of revenue line items in the Condensed Consolidated Statements of Operations.

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

The following table presents our operating segment results for the three and six months ended June 30, 2021 and 2020:

<i>(in thousands)</i>	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>
<b>Revenues:</b>				
<b>Refined Coal:</b>				
Earnings in equity method investments	\$ 21,437	\$ 8,168	\$ 39,749	\$ 16,441
License royalties, related party	3,657	3,313	7,723	6,359
	<u>25,094</u>	<u>11,481</u>	<u>47,472</u>	<u>22,800</u>
<b>Advanced Purification Technologies:</b>				
Consumables	15,976	8,170	33,007	17,387
	<u>15,976</u>	<u>8,170</u>	<u>33,007</u>	<u>17,387</u>
Total segment reporting revenues	<u>41,070</u>	<u>19,651</u>	<u>80,479</u>	<u>40,187</u>
<b>Adjustments to reconcile to reported revenues:</b>				
Earnings in equity method investments	(21,437)	(8,168)	(39,749)	(16,441)
Total reported revenues	<u>\$ 19,633</u>	<u>\$ 11,483</u>	<u>\$ 40,730</u>	<u>\$ 23,746</u>
<b>Segment operating income (loss):</b>				
Refined Coal	\$ 24,905	\$ 10,777	\$ 47,176	\$ 21,637
Advanced Purification Technologies	258	(29,999)	273	(37,369)
Total segment operating income (loss)	<u>\$ 25,163</u>	<u>\$ (19,222)</u>	<u>\$ 47,449</u>	<u>\$ (15,732)</u>

## **RC**

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

<i>(in thousands)</i>	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>
Earnings from Tinum Group	\$ 19,125	\$ 6,764	\$ 35,487	\$ 13,202
Earnings from Tinum Services	2,312	1,404	4,262	3,242
Earnings (loss) from other	—	—	—	(3)
Earnings from equity method investments	<u>\$ 21,437</u>	<u>\$ 8,168</u>	<u>\$ 39,749</u>	<u>\$ 16,441</u>

### **For the three months ended June 30, 2021 and June 30, 2020**

RC earnings increased primarily due to an increase in equity earnings in Tinum Group for the three months ended June 30, 2021 compared to the corresponding quarter in 2020, primarily from the addition of three new RC facilities in 2020.

For the three months ended June 30, 2021, earnings from Tinum Services increased compared to the corresponding quarter in 2020 primarily due to an increase in tonnage quarter over quarter and an increase in the number of operating RC facilities in which Tinum Services provides operating and maintenance services from 19 to 21.

RC earnings related to M-45 License royalties increased for the three months ended June 30, 2021 compared to the corresponding quarter in 2020 due to higher tonnage quarter over quarter, which was primarily a result of an increase in RC facilities that use the M-45 Technology. While tonnage increased quarter over quarter, there was a reduction in the royalty rate per ton primarily attributable to a majority of the RC contracts having fixed lease payments such that increased tonnages did not result in increased earnings.

### **For the six months ended June 30, 2021 and June 30, 2020**

RC earnings increased primarily due to an increase in equity earnings in Tinum Group for the six months ended June 30, 2021 compared to the six months ended June 30, 2020, primarily from the addition of three new RC facilities in 2020. Further, for the six months ended June 30, 2020, we recognized equity earnings from Tinum Group equal to our proportionate share of Tinum Group's net income for the period, which was less than cash distributions received for the same period.



For the six months ended June 30, 2021, earnings from Tinum Services increased compared to the six months ended June 30, 2020 primarily due to an increase in tonnage quarter over quarter and an increase in the number of operating RC facilities in which Tinum Services provides operating and maintenance services from 19 to 21.

RC earnings related to M-45 License royalties increased for the six months ended June 30, 2021 compared to the six months ended June 30, 2020 due to higher tonnage period over period, which was primarily a result of an increase in RC facilities that use the M-45 Technology. While tonnage increased period over period, there was a reduction in the royalty rate per ton primarily attributable to lower royalty amounts paid related to a facility that was partially retained during 2020 and was producing a higher per-ton royalty amount prior to closure by Tinum in the second half of 2020.

#### Outlook

Both Tinum Group and Tinum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021. During the second quarter of 2021, Tinum Group ceased operating an RC facility, with the remaining RC facilities expected to cease operations during the second half of 2021. The loss of equity earnings, distributions and M-45 License royalties beginning in 2022 will have a material adverse effect on our financial condition and consolidated operating results compared to historical periods. Earnings in the RC segment for 2021 will continue to be impacted by coal-fired dispatch and invested facilities with leases subject to periodic renewals being terminated, repriced, or otherwise subject to renegotiated terms. As a result of the wind-down in both Tinum Group's and Tinum Services' operations occurring through the remainder of 2021, we expect our earnings in both entities to decrease in 2021 compared to 2020. However, in 2021, cash distributions should substantially exceed earnings.

#### RC Segment EBITDA and Adjusted EBITDA

<i>(in thousands)</i>	<u>Three Months Ended June 30,</u>		<u>Six Months Ended June 30,</u>	
	<u>2021</u>	<u>2020</u>	<u>2021</u>	<u>2020</u>
RC Segment operating income	\$ 24,905	\$ 10,777	\$ 47,176	\$ 21,637
Depreciation, amortization, depletion and accretion	12	32	32	59
Interest expense	7	28	7	160
RC Segment EBITDA	24,924	10,837	47,215	21,856
Cash distributions from equity method investees	20,625	15,400	43,876	32,516
Equity earnings	(21,437)	(8,168)	(39,749)	(16,441)
RC Segment Adjusted EBITDA	<u>\$ 24,112</u>	<u>\$ 18,069</u>	<u>\$ 51,342</u>	<u>\$ 37,931</u>

#### APT

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

#### For the three months ended June 30, 2021 and June 30, 2020

APT segment operating income increased for the three months ended June 30, 2021 compared to the three months ended June 30, 2020 primarily due to the Impairment Charge of \$26.1 million recorded for the three months ended June 30, 2020. In addition consumables revenues and associated margins increased for the three months ended June 30, 2021, driven by an increase in volume quarter over quarter, specifically product sold under the Supply Agreement. Our gross margin, exclusive of depreciation and amortization, increased primarily due to the higher volumes that resulted in a lower fixed cost per pound compared to the three months ended June 30, 2020.

#### For the six months ended June 30, 2021 and June 30, 2020

APT segment operating income increased for the six months ended June 30, 2021 compared to the six months ended June 30, 2020 primarily due to the Impairment Charge of \$26.1 million recorded for the six months ended June 30, 2020. Further, during the six months ended June 30, 2021 consumable revenues and associated margins increased, driven by an increase in volume period over period, specifically products sold under the Supply Agreement.

During the three and six months ended June 30, 2020, we incurred costs of \$0.3 million related to sequestration of certain of our employees at the Red River Plant. These costs included hazardous pay, lodging expense and other related costs for 60 days.

## *Outlook*

Based on current market estimates, we believe that the APT segment will continue to be affected by power generation and the pricing of other sources, including natural gas and renewable energy, as well as weather throughout the U.S. For the remainder of 2021, we expect other power generation sources to have higher prices than in previous quarters, increasing demand for our products. Further, in 2021 and beyond, we expect the Supply Agreement to continue to play a significant role in diversifying our product mix into markets outside of power generation.

### *APT Segment Adjusted EBITDA (Loss)*

<i>(in thousands)</i>	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2021</b>	<b>2020</b>	<b>2021</b>	<b>2020</b>
APT Segment operating income (loss)	\$ 258	\$ (29,999)	\$ 273	\$ (37,369)
Depreciation, amortization, depletion and accretion	1,770	1,538	3,702	3,782
Amortization of Upfront Customer Consideration	127	—	254	—
Interest expense, net	79	93	158	187
APT Segment EBITDA (loss)	\$ 2,234	\$ (28,368)	\$ 4,387	\$ (33,400)
Gain on change in estimate, asset retirement obligation (1)	(1,942)	—	(1,942)	—
Impairment	—	26,103	—	26,103
APT Segment Adjusted EBITDA (loss)	\$ 292	\$ (2,265)	\$ 2,445	\$ (7,297)

(1) Included in APT segment operating income for the three and six months ended June 30, 2021 is a \$1.9 million gain related to the change in the Marshall Mine ARO as of June 30, 2021.

## Liquidity and Capital Resources

### Overview of Factors Affecting Our Liquidity

For the six months ended June 30, 2021, our liquidity position was positively affected primarily from distributions from Tinuum Group and Tinuum Services, M-45 License royalty payments from Tinuum Group.

As of June 30, 2021, our principal sources of liquidity include:

- cash on hand, excluding restricted cash of \$16.0 million under the Line of Credit and Surety Agreement requirements;
- distributions from Tinuum Group and Tinuum Services;
- M-45 License royalty payments from Tinuum Group;
- operations of the APT segment; and
- the Line of Credit.

As of June 30, 2021, our principal uses of liquidity include:

- our business operating expenses, including federal and state tax payments;
- payments on our lease obligations; and
- payments of ARO liabilities associated with the Five Forks Mine and Marshall Mine.

### Tinuum Group and Tinuum Services Distributions

The following table summarizes the cash distributions from our equity method investments that most significantly affected our consolidated cash flow results for the six months ended June 30, 2021 and 2020:

<i>(in thousands)</i>	Six Months Ended June 30,	
	2021	2020
Tinuum Group	\$ 38,874	\$ 27,364
Tinuum Services	5,002	5,152
Distributions from equity method investees	\$ 43,876	\$ 32,516

Cash distributions from Tinuum Group for the six months ended June 30, 2021 increased by \$11.5 million compared to the six months ended June 30, 2020 primarily due to three RC facilities added in 2020.

Future cash flows from Tinuum are expected to range from \$30 million to \$40 million. The key drivers in achieving these future cash flows are based on the following:

- 22 invested facilities as of June 30, 2021 and inclusive of all net Tinuum cash flows (distributions and license royalties), offset by estimated federal and state income tax payments.

Expected future cash flows from Tinuum Group are based on the following key assumptions:

- Tinuum Group continues to not operate retained facilities;
- Tinuum Group does not have material unexpected expenditures related to remediation costs;
- Tax equity lease renewals on invested facilities are not terminated or repriced; and
- Coal-fired power generation remains consistent with contractual expectations.

Both Tinuum Group and Tinuum Services expect to commence significantly winding down their operations starting in the third quarter of 2021 due to the expected expiration of the Section 45 tax credit period as of December 31, 2021. As such, our distributions from our RC segment are expected to decline during the second half of 2021 and will substantially cease as of December 31, 2021, pending final remediation of Tinuum Group's RC facilities that is expected to occur in 2022.

### PPP Loan

On April 20, 2020, we entered into the PPP Loan under the PPP, evidenced by a promissory note with BOK, providing for \$3.3 million in proceeds, which was funded on April 21, 2020. The PPP Loan matures April 21, 2022. The PPP Loan principal may be forgiven subject to the terms of the PPP and approval by the SBA. The interest rate on the PPP Loan is 1.00%. The PPP Loan is unsecured and contains customary events of default relating to, among other things, payment defaults, making materially false and misleading representations to the SBA or BOK, or breaching the terms of the PPP Loan. The occurrence of an event of default may result in the repayment of all amounts outstanding, collection of all amounts owing from us, or filing suit and obtaining judgment against us.

Under the PPPFA, monthly payments of principal and interest commence on the later of 10 months following the "covered period" (as defined in the PPPFA) or the date that BOK notifies us that the SBA has notified BOK that all or a portion of the PPP Loan has not been forgiven.

In January 2021, we submitted an application to the SBA for forgiveness of the PPP Loan and on July 27, 2021, we received formal notification in the form of a letter dated July 19, 2021 from the Lender that the SBA approved our PPP Loan forgiveness application for our Loan in the amount of \$3.3 million (including accrued interest). We will account for the debt forgiveness during its fiscal third quarter of 2021 and will recognize a gain on extinguishment of debt in the amount of \$3.3 million in the Consolidated Statements of Operations.

Our business has been classified as an essential business, and therefore we continue to operate on a modified basis to comply with governmental restrictions and public health authority guidelines. In April 2020, we sequestered approximately 60 employees to continue to run the Red River Plant and build-up inventory in order to supply our customers. This resulted in additional costs as the sequestered employees received hazard pay. We used proceeds from the PPP Loan to fund our payroll costs.

### ***Senior Term Loan***

On December 7, 2018, we and ADA-ES, Inc. ("ADA"), a wholly-owned subsidiary, and certain other subsidiaries of the Company as guarantors, The Bank of New York Mellon as administrative agent, and Apollo Credit Strategies Master Fund Ltd and Apollo A-N Credit Fund (Delaware) L.P. (collectively "Apollo"), affiliates of a beneficial owner of greater than five percent of our common stock and a related party, entered into the Senior Term Loan in the amount of \$70.0 million, less original issue discount of \$2.1 million. Proceeds from the Senior Term Loan were used to fund the acquisition of Carbon Solutions. We also paid debt issuance costs of \$2.0 million related to the Senior Term Loan. The Senior Term Loan bore interest at a rate equal to 3-month LIBOR (subject to a 1.5% floor) + 4.75% per annum, which was adjusted quarterly to the current 3-month LIBOR rate, and interest was payable quarterly in arrears. The Senior Term Loan was secured by substantially all the assets of the Company, including the cash flows from the Tinum Entities, but excluding our equity interests in the Tinum entities.

On June 1, 2021 and prior to the Senior Term Loan's maturity date, we paid-off in its entirety the Senior Term Loan and all remaining accrued interest through this date in the amount of \$6.1 million. The Company did not incur any prepayment fees associated with the early pay-off.

### ***Line of Credit***

In September 2013, ADA, as borrower, and us, as guarantor, entered into the Line of Credit with the Lender for an aggregate borrowing amount of \$10.0 million, which was secured by certain amounts due to us from certain Tinum Group RC leases. The Line of Credit has been amended 15 times from the period from December 2, 2013 through June 30, 2021 and included a reduction in the borrowing amount to \$5.0 million in September 2018.

On March 23, 2021, we and the Lender entered into an amendment to the Line of Credit (the "Fifteenth Amendment"), which extended the maturity date of the Line of Credit to December 31, 2021 and increased the minimum cash requirement from \$5.0 million to \$6.0 million. On July 29, 2021, the Company and the Lender entered into the Sixteenth Amendment (the "Sixteenth Amendment") to the Line of Credit. The Sixteenth Amendment amends certain terms and conditions related to collateral securing the Line of Credit.

As of June 30, 2021, we have \$3.7 million of borrowing availability and no outstanding borrowings under the Line of Credit.

### ***Stock Repurchases and Dividends***

In November 2018, the Board authorized us to purchase up to \$20.0 million of our outstanding common stock under a stock repurchase program (the "Stock Repurchase Program"), which was to remain in effect until December 31, 2019 unless otherwise modified by the Board. As of November 2019, \$2.9 million remained outstanding related to the Stock Repurchase Program. In November 2019, the Board authorized an incremental \$7.1 million to the Stock Repurchase Program and provided that it will remain in effect until all amounts are utilized or it is otherwise modified by the Board.

Under the Stock Repurchase Program, for the three and six months ended June 30, 2021, we did not repurchase any shares. For the three and six months ended June 30, 2020, we purchased zero and 20,613 shares, respectively, of our common stock for cash of zero and \$0.2 million, respectively, inclusive of commissions and fees. As of June 30, 2021, we had \$7.0 million remaining under the Stock Repurchase Program.

For the six months ended June 30, 2021 and 2020, we declared and paid quarterly cash dividends to stockholders of zero and \$4.8 million, respectively.

## Liquidity Outlook

Our ability to continue to generate sufficient cash flow required to meet ongoing operational needs and obligations, and make potential future dividend payments and share repurchases depends upon several factors, including executing on our contracts and initiatives, receiving M-45 License royalty payments from Tinum Group and distributions from Tinum Group and Tinum Services, increasing our share of the market for APT consumables, including expanding our overall AC business into additional adjacent markets and improving our customer and product mix.

For the remainder of 2021, our primary source of liquidity is expected to be distributions from Tinum Group and Tinum Services. These distributions in 2021 will provide sufficient cash on hand to fund operations in 2021 and 2022. For 2021, we expect to spend \$11.8 million in capital expenditures compared to \$7.1 million incurred in 2020. This increase is primarily the result of product specific capital related to the Supply Agreement, which is estimated to be \$3.7 million for the second half of 2021, and routine scheduled maintenance outages, which occurred in the second quarter of 2021. As a result of the Plant Incident, the Red River Plant was shut down for nine days for repair. The cash flow impact associated with the incident was \$0.2 million for repairs and \$0.7 million in purchased inventory.

During the three months ending June 30, 2021, we entered into the Retention Agreements, which are for the purpose of retaining officers and key employees in order to maintain our current business operations while we pursue and execute on our strategic initiatives. The total amount due at time of payment pursuant to the Retention Agreements is \$2.4 million, which will be a future use of cash.

Due to the expiration of the Section 45 tax period as of December 31, 2021 and the resultant wind down of Tinum Group's and Tinum Services' operations by the end of 2021, distributions from Tinum Group will no longer be a material source of liquidity after 2021.

As we look to 2022 and beyond, our primary sources of liquidity are expected to be from cash on hand and through our ongoing operations of our APT segment. We believe the Supply Agreement will provide material incremental volume and lower operating cost efficiencies of our Red River plant, providing additional sources of operating cash flows in the future. Full and partial reimbursements on capital expenditures from Cabot will offset our uses of investing cash flows. Further, we intend to fund the remaining portion of the Reclamation Costs from cash on hand as well as cash generated from the Supply Agreement. We believe that as reclamation activities occur and the related bonded amounts required under the Surety Agreement are able to be reduced, there may be an opportunity to further reduce the collateral requirement. In 2022 and beyond, our annual capital expenditures are expected to average approximately \$5.0 million.

## Sources and Uses of Cash

### Six Months Ended June 30, 2021 vs. Six Months Ended June 30, 2020

Cash, cash equivalents and restricted cash increased from \$35.9 million as of December 31, 2020 to \$57.3 million as of June 30, 2021. The following table summarizes our cash flows for the six months ended June 30, 2021 and 2020, respectively:

<i>(in thousands)</i>	Six Months Ended June 30,		Change
	2021	2020	
Cash and cash equivalents and restricted cash provided by (used in):			
Operating activities	\$ 18,151	\$ 24,085	\$ (5,934)
Investing activities	20,401	(4,696)	25,097
Financing activities	(17,149)	(14,736)	(2,413)
Net change in cash and cash equivalents and restricted cash	<u>\$ 21,403</u>	<u>\$ 4,653</u>	<u>\$ 16,750</u>

### Cash flow from operating activities

Cash flows provided by operating activities for the six months ended June 30, 2021 decreased by \$5.9 million compared to the six months ended June 30, 2020. The net decrease was primarily attributable to a decrease in earnings from equity method investees of \$23.3 million, impairment of long-lived assets of \$26.1 million, and a decrease in Distributions from equity method investees, return on investment of \$13.4 million for the six months ended June 30, 2021 compared to the six months ended June 30, 2020. Offsetting this net decrease in cash flows provided by operating activities was an increase in net income for the six months ended June 30, 2021 compared to net loss for the six months ended June 30, 2020 of \$56.0 million.

### Cash flow from investing activities

Cash flows provided by investing activities for the six months ended June 30, 2021 increased by \$25.1 million compared to the six months ended June 30, 2020 primarily from distributions from equity earnings in excess of cumulative earnings.

## **Cash flow from financing activities**

Cash flows used in financing activities for the six months ended June 30, 2021 increased by \$2.4 million compared to the six months ended June 30, 2020 primarily from an increase in principal loan repayments on the Senior Term Loan of \$4.0 million and proceeds received from the PPP Loan during the six months ended June 30, 2020 of \$3.3 million. Offsetting these increases was a decrease period over period in dividends paid of \$4.7 million and repurchases of common shares of \$0.2 million.

## **Contractual Obligations**

During the six months ended June 30, 2021, there were no material changes to our contractual obligations outside of the ordinary course of business from those reported as of December 31, 2020, except for a reduction in the Marshall Mine ARO of \$1.9 million based on revised estimates from a reduction in scope of the reclamation work.

## **Off-Balance Sheet Arrangements**

As of June 30, 2021, we had outstanding surety bonds of \$24.1 million related to performance requirements under reclamation contracts associated with both the Five Forks Mine and the Marshall Mine. As of June 30, 2021, we had restricted cash of \$10.0 million securing the Surety Agreement. We expect that the obligations secured by these surety bonds will be performed in the ordinary course of business and in accordance with the applicable contractual terms. To the extent that the obligations are performed, the related surety bonds should be released, and we should not have any continuing obligations. However, in the event any surety bond is called, our indemnity obligations could require us to reimburse the issuer of the surety bond.

## **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 2020 10-K.

## **Recently Issued Accounting Standards**

Refer to Note 1 of the Condensed Consolidated Financial Statements included in Item 1 of this Quarterly Report for information regarding recently issued accounting standards applicable to us.

## **Forward-Looking Statements Found in this Report**

This Quarterly Report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, that involve risks and uncertainties. In particular, such forward-looking statements are found in this Part I, Item 2 above. Words or phrases such as "anticipates," "believes," "expects," "intends," "plans," "estimates," "predicts," the negative expressions of such words, or similar expressions are used in this Quarterly Report to identify forward-looking statements, and such forward-looking statements include, but are not limited to, statements or expectations regarding:

- (a) the scheduled expiration of the IRC Section 45 tax credit period in 2021 and the resulting wind down of the business of, and loss of revenue from, Tinum Group and Tinum Services;
- (b) the production and sale of RC by RC facilities through the remainder of 2021 that will qualify for Section 45 tax credits and associated cash flows from Tinum Group expected through 2021;
- (c) expected growth or contraction in and potential size of our target APT markets, including the water purification, food and beverage and pharmaceuticals markets;
- (d) expected supply and demand for our APT products and services;
- (e) increasing competition in the APT market;
- (f) future level of research and development activities;
- (g) the effectiveness of our technologies and the benefits they provide;
- (h) probability of any loss occurring with respect to certain guarantees made by Tinum Group;
- (i) the timing of awards of, and work and related testing under, our contracts and agreements and their value;
- (j) the timing and amounts of or changes in future revenues, royalties earned, backlog, funding for our business and projects, margins, expenses, earnings, tax rates, cash flows, royalty payment obligations, working capital, liquidity and other financial and accounting measures;
- (k) the amount of future capital expenditures needed for our business;
- (l) awards of patents designed to protect our proprietary technologies both in the U.S. and other countries;
- (m) the adoption and scope of regulations to control certain chemicals in drinking water; and
- (n) opportunities to effectively provide solutions to U.S. coal-related businesses to comply with regulations, improve efficiency, lower costs and maintain reliability.

The forward-looking statements included in this Quarterly Report involve risks and uncertainties. Actual events or results could differ materially from those discussed in the forward-looking statements as a result of various factors including, but not limited to, timing of new and pending regulations and any legal challenges to or extensions of compliance dates of them; the U.S. government's failure to promulgate regulations 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; decreases in the production of RC; our inability to commercialize our APT technologies on favorable terms; our inability to ramp up our operations to effectively address recent and expected growth in our APT business; loss of key personnel; availability of materials and equipment for our businesses; intellectual property infringement claims from third parties; pending litigation; as well as other factors relating to our business, as described in our filings with the SEC, with particular emphasis on the risk factor disclosures contained in those filings. You are cautioned not to place undue reliance on the forward-looking statements made in this Quarterly Report and to consult filings we have made and will make with the SEC for additional discussion concerning risks and uncertainties that may apply to our business and the ownership of our securities. The forward-looking statements contained in this Quarterly Report are presented as of the date hereof, and we disclaim any duty to update such statements unless required by law to do so.

### **Item 3. Quantitative and Qualitative Disclosures about Market Risk**

The information under this Item is not required to be provided by smaller reporting companies.

### **Item 4. Controls and Procedures**

#### **Evaluation of Disclosure Controls and Procedures**

As required by Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), we have evaluated, under the supervision of and with the participation of our management, including our principal executive officer and principal financial officer, the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of the end of the period covered by this report. Our disclosure controls and procedures are designed to ensure that information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Based upon this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of June 30, 2021.

#### **Changes in Internal Control Over Financial Reporting**

There have been no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) during the fiscal quarter ended June 30, 2021 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## PART II. OTHER INFORMATION

### Item 1. Legal Proceedings

From time to time, we are involved in litigation, claims and other proceedings related to the conduct of our business. Information with respect to this item may be found in Note 11 "Commitments and Contingencies" to the consolidated financial statements included in Item 1 of Part I of this Quarterly Report.

### Item 1A. Risk Factors

There are no material updates to our risk factors as disclosed in the 2020 Form 10-K except as set forth below. This risk factor should be read together with the risk factors in the 2020 Form 10-K.

#### **Our inability to meet customer supply requirements due to damage to or insufficient production capacity of our manufacturing facility may have a material adverse effect on our business, results of operations and financial condition.**

We own and operate a single activation-based manufacturing plant (the Red River Plant), which is our sole manufacturing plant for producing and selling products to our customers. Our ability to meet customer expectations, manage inventory, complete sales and achieve our objectives for operating efficiencies depends on the full-time operation of the Red River Plant. We cannot replicate our manufacturing methods at another plant due to the limited availability of similar manufacturing plants, the additional costs incurred in supplying raw materials such as lignite to another plant, and the risk of revealing our confidential and proprietary technologies and manufacturing processes.

If the Red River Plant was destroyed or damaged in a significant manner, we would suffer a loss of inventory to supply customers, likely incur additional costs to deliver products to our customers, and disrupt the ordinary course of our business. In addition, if contractual demand exceeds manufacturing capacity, we would jeopardize our ability to fulfill obligations under our contracts, which could, in turn, result in reduced sales, contract penalties or terminations, damage to our customer relationships and could have a material adverse effect on our business. While we have insured the Red River Plant for damage or destruction as well as for losses from business interruptions, there can be no assurance that any insurance coverage will be sufficient to cover any such losses.

Further, a prolonged disruption in our operations due to Red River Plant downtime or having to meet customer requirements that exceed its maximum manufacturing capacity would require us to seek alternative customer supply arrangements, which may not be on attractive terms to us or could lead to delays in distribution of products to our customers, either of which could have a material adverse effect on our business, results of operations and financial condition.

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

None.

### Item 3. Defaults Upon Senior Securities

None.

### Item 4. Mine Safety Disclosures

The statement concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K is included in Exhibit 95.1 to this Quarterly Report.

### Item 5. Other Information

None.



## Item 6. Exhibits

Exhibit No.	Description	Form	File No.	Incorporated by Reference Exhibit	Filing Date
10.1	<a href="#"><u>Sixteenth Amendment of 2013 Loan and Security Agreement by and among ADA-ES, Inc., Advanced Emissions Solutions, Inc., and BOK, NA d/b/a Bank of Oklahoma dated as of July 29, 2021</u></a>	8-K	001-37822	10.1	July 29, 2021
31.1	<a href="#"><u>Certification of Principal Executive Officer of Advanced Emissions Solutions, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)*</u></a>				
31.2	<a href="#"><u>Certification of Principal Financial Officer of Advanced Emissions Solutions, Inc. Pursuant to 17 CFR 240.13a-14(a) or 17 CFR 240.15d-14(a)*</u></a>				
32.1	<a href="#"><u>Certification of Principal Executive Officer and Principal Financial Officer of Advanced Emissions Solutions, Inc. Pursuant to 18 U.S.C Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*</u></a>				
95.1	<a href="#"><u>Mine Safety Disclosure Exhibit*</u></a>				
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)

August 9, 2021

By: /s/ Greg Marken  
Greg Marken  
Interim Chief Executive Officer  
(Principal Executive Officer)

August 9, 2021

By: /s/ Morgan Fields  
Morgan Fields  
Vice President of Accounting  
(Principal Financial Officer)