UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(Mark one)

☒ **Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the quarterly period ended September 30, 2022

or

☐ **Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the transition period from___________to

Commission File No. 0-07099

CECO ENVIRONMENTAL CORP.
(Exact name of registrant as specified in its charter)

Delaware **(State or other jurisdiction of Incorporation or organization)**	**13-2566064** **(IRS Employer Identification No.)**
14651 North Dallas Parkway **Suite 500** **Dallas, Texas** **(Address of principal executive offices)**	**75254** **(Zip Code)**

Registrant's telephone number, including area code: (214) 357-6181

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

Title of each class	Trading Symbol	Name of each exchange on which registered
Common Stock, par value $0.01 per share	CECO	The NASDAQ Stock Market LLC

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 every Interactive Data File required to be submitted 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 such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth 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 ☒

The number of shares outstanding of each of the issuer's classes of common equity, as of the latest practical date: 34,270,494 shares of common stock, par value $0.01 per share, as of November 1, 2022.

CECO ENVIRONMENTAL CORP. AND SUBSIDIARIES
QUARTERLY REPORT ON FORM 10-Q
For the quarter ended September 30, 2022

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PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

CONDENSED CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)	(unaudited) September 30, 2022	December 31, 2021
ASSETS		
Current assets:		
Cash and cash equivalents	$ 35,188	$ 29,902
Restricted cash	1,026	2,093
Accounts receivable, net	89,959	74,991
Costs and estimated earnings in excess of billings on uncompleted contracts	56,775	51,429
Inventories, net	24,740	17,052
Prepaid expenses and other current assets	14,140	10,760
Prepaid income taxes	866	2,784
Total current assets	222,694	189,011
Property, plant and equipment, net	20,260	15,948
Right-of-use assets from operating leases	12,049	10,893
Goodwill	182,365	161,183
Intangible assets – finite life, net	36,095	25,841
Intangible assets – indefinite life	9,346	9,629
Deferred income taxes	505	505
Deferred charges and other assets	2,915	3,187
Total assets	$ 486,229	$ 416,197
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Current portion of debt	$ 3,303	$ 2,203
Accounts payable and accrued expenses	100,354	84,081
Billings in excess of costs and estimated earnings on uncompleted contracts	33,871	28,908
Note payable - current	500	—
Income taxes payable	1,799	1,493
Total current liabilities	139,827	116,685
Other liabilities	14,986	14,826
Debt, less current portion	107,034	61,577
Deferred income tax liability, net	9,809	8,390
Operating lease liabilities	9,153	8,762
Total liabilities	280,809	210,240
Commitments and contingencies		
Shareholders' equity:		
Preferred stock, $.01 par value; 10,000 shares authorized, none issued	—	—
Common stock, $.01 par value; 100,000,000 shares authorized, 34,329,751 and 35,028,197 shares issued and outstanding at September 30, 2022 and December 31, 2021, respectively	343	350
Capital in excess of par value	249,248	252,989
Accumulated loss	(27,595)	(36,715)
Accumulated other comprehensive loss	(21,457)	(12,070)
Total CECO shareholders' equity	200,539	204,554
Non-controlling interest	4,881	1,403
Total shareholders' equity	205,420	205,957
Total liabilities and shareholders' equity	$ 486,229	$ 416,197

The notes to the condensed consolidated financial statements are an integral part of the above statements.

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(unaudited)

	Three months ended September 30,		Nine months ended September 30,	
(in thousands, except share data)	**2022**	**2021**	**2022**	**2021**
Net sales	$ 108,414	$ 79,979	$ 306,225	$ 230,551
Cost of sales	75,988	57,254	215,696	158,164
Gross profit	32,426	22,725	90,529	72,387
Selling and administrative expenses	25,166	20,929	66,806	60,894
Amortization and earnout expenses	2,039	1,776	4,939	5,849
Restructuring expenses	—	397	73	655
Acquisition and integration expenses	1,287	219	3,827	357
Executive transition expenses	1,161	—	1,161	29
Income (loss) from operations	2,773	(596)	13,723	4,603
Other income (expense), net	1,276	185	2,754	(1,155)
Interest expense	(1,569)	(722)	(3,489)	(2,152)
Income (loss) before income taxes	2,480	(1,133)	12,988	1,296
Income tax expense	314	63	3,287	813
Net income (loss)	2,166	(1,196)	9,701	483
Non-controlling interest	223	53	579	259
Net income (loss) attributable to CECO Environmental Corp.	$ 1,943	$ (1,249)	$ 9,122	$ 224
Earnings (loss) per share:				
Basic	$ 0.06	$ (0.04)	$ 0.26	$ 0.01
Diluted	$ 0.06	$ (0.04)	$ 0.26	$ 0.01
Weighted average number of common shares outstanding:				
Basic	34,455,657	35,472,298	34,791,129	35,463,279
Diluted	34,871,313	35,472,298	35,035,041	35,729,887

The notes to the condensed consolidated financial statements are an integral part of the above statements.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(unaudited)

	Three months ended September 30,		Nine months ended September 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Net income (loss)	$ 2,166	$ (1,196)	$ 9,701	$ 483
Other comprehensive income (loss), net of tax:				
Foreign currency translation (loss) gain	(5,890)	(250)	(9,387)	95
Comprehensive (loss) income	$ (3,724)	$ (1,446)	$ 314	$ 578

The notes to the condensed consolidated financial statements are an integral part of the above statements.

CONDENSED CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(unaudited)

(in thousands)	Common Stock Shares	Common Stock Amount	Capital in excess of par value	Accumulated Loss	Accumulated Other Comprehensive Loss	Treasury Stock Shares	Treasury Stock Amount	Non-controlling interest	Total Shareholders' Equity
Balance December 31, 2020	35,505	$ 355	$ 255,296	$ (38,141)	$ (14,496)	(138)	$ (356)	$ 953	$ 203,611
Net income for the three months ended March 31, 2021	—	—	—	1,181	—	—	—	117	1,298
Exercise of stock options	2	—	13	—	—	—	—	—	13
Restricted stock units issued	40	1	(134)	—	—	—	—	—	(133)
Share based compensation earned	21	—	807	—	—	—	—	—	807
Translation gain	—	—	—	—	55	—	—	—	55
Balance March 31, 2021	35,568	$ 356	$ 255,982	$ (36,960)	$ (14,441)	(138)	$ (356)	$ 1,070	$ 205,651
Net income for the three months ended June 30, 2021	—	—	—	293	—	—	—	89	382
Restricted stock units issued	181	1	(271)	—	—	—	—	—	(270)
Share based compensation earned	—	—	887	—	—	—	—	—	887
Translation gain	—	—	—	—	290	—	—	—	290
Noncontrolling interest distribution	—	—	—	—	—	—	—	(107)	(107)
Balance June 30, 2021	35,749	$ 357	$ 256,598	$ (36,667)	$ (14,151)	(138)	$ (356)	$ 1,052	$ 206,833
Net loss for the three months ended September 30, 2021	—	—	—	(1,249)	—	—	—	53	(1,196)
Restricted stock units issued	41	1	(111)	—	—	—	—	—	(110)
Share based compensation earned	19	—	995	—	—	—	—	—	995
Translation loss	—	—	—	—	(250)	—	—	—	(250)
Common stock repurchase (See Note 8)	—	—	—	—	—	(521)	(3,745)	—	(3,745)
Balance September 30, 2021	35,809	$ 358	$ 257,482	$ (37,916)	$ (14,401)	(659)	$ (4,101)	$ 1,105	$ 202,527

(in thousands)	Common Stock Shares	Common Stock Amount	Capital in excess of par value	Accumulated Loss	Accumulated Other Comprehensive Loss	Treasury Stock Shares	Treasury Stock Amount	Non-controlling interest	Total Shareholders' Equity
Balance December 31, 2021	35,028	$ 350	$ 252,989	$ (36,715)	$ (12,070)	—	$ —	$ 1,403	$ 205,957
Net income for the three months ended March 31, 2022	—	—	—	2,792	—	—	—	18	2,810
Restricted stock units issued	34	—	(67)	—	—	—	—	—	(67)
Share based compensation earned	14	—	953	—	—	—	—	—	953
Translation loss	—	—	—	—	(531)	—	—	—	(531)
Noncontrolling interest distributions	—	—	—	—	—	—	—	(900)	(900)
Fair value of noncontrolling interest equity (see Note 14)	—	—	—	—	—	—	—	5,000	5,000
Balance March 31, 2022	35,076	$ 350	$ 253,875	$ (33,923)	$ (12,601)	—	$ —	$ 5,521	$ 213,222
Net income for the three months ended June 30, 2022	—	—	—	4,385	—	—	—	339	4,724
Restricted stock units issued	183	2	(211)	—	—	—	—	—	(209)
Share based compensation earned	—	—	915	—	—	—	—	—	915
Common stock repurchase and retirement (see Note 8)	(725)	(7)	(4,317)	—	—	—	—	—	(4,324)
Translation loss	—	—	—	—	(2,966)	—	—	—	(2,966)
Fair value of noncontrolling interest equity (see Note 14)	—	—	—	—	—	—	—	(901)	(901)
Balance June 30, 2022	34,534	$ 345	$ 250,262	$ (29,538)	$ (15,567)	—	$ —	$ 4,959	$ 210,461
Net income for the three months ended September 30, 2022	—	—	—	1,943	—	—	—	223	2,166
Restricted stock units issued	32	—	(65)	—	—	—	—	—	(65)
Share based compensation earned	20	—	1,242	—	—	—	—	—	1,242
Common stock repurchase and retirement (see Note 8)	(256)	(2)	(2,191)	—	—	—	—	—	(2,193)
Translation loss	—	—	—	—	(5,890)	—	—	—	(5,890)
Noncontrolling interest distributions	—	—	—	—	—	—	—	(301)	(301)
Balance September 30, 2022	34,330	$ 343	$ 249,248	$ (27,595)	$ (21,457)	—	$ —	$ 4,881	$ 205,420

The notes to the condensed consolidated financial statements are an integral part of the above statements.

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(unaudited)

(in thousands)	Nine months ended September 30, 2022	2021
Cash flows from operating activities:		
Net income	$ 9,701	$ 483
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	7,609	7,373
Unrealized foreign currency loss	2,525	1,531
Fair value adjustment to earnout liabilities	—	500
Earnout payments	(1,007)	(587)
Gain on sale of property and equipment	(7)	(67)
Debt discount amortization	279	304
Share-based compensation expense	2,859	2,466
Bad debt expense	823	456
Inventory reserve expense	115	428
Changes in operating assets and liabilities, net of acquisitions and divestitures:		
Accounts receivable	(15,772)	(7,502)
Costs and estimated earnings in excess of billings on uncompleted contracts	(4,846)	(5,091)
Inventories	(4,620)	(2,172)
Prepaid expense and other current assets	(1,900)	3,448
Deferred charges and other assets	2,311	43
Accounts payable and accrued expenses	17,648	5,655
Billings in excess of costs and estimated earnings on uncompleted contracts	6,567	3,903
Income taxes payable	(51)	(23)
Other liabilities	(2,538)	(916)
Net cash provided by operating activities	19,696	10,232
Cash flows from investing activities:		
Acquisitions of property and equipment	(2,367)	(1,740)
Net proceeds from sale of assets	7	533
Net cash paid for acquisitions	(44,900)	—
Net cash used in investing activities	(47,260)	(1,207)
Cash flows from financing activities:		
Borrowings on revolving credit lines	73,600	32,100
Repayments on revolving credit lines	(35,900)	(36,900)
Borrowings on long-term debt	11,000	—
Repayments of long-term debt	(2,294)	(2,188)
Deferred financing fees paid	(130)	—
Payments on finance leases and financing liability	(444)	(411)
Earnout payments	—	(823)
Proceeds from employee stock purchase plan and exercise of stock options	169	239
Noncontrolling interest distributions	(1,201)	(107)
Common stock repurchase	(6,558)	(3,745)
Net cash provided by (used in) financing activities	38,242	(11,835)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(6,459)	(535)
Net increase (decrease) in cash, cash equivalents and restricted cash	4,219	(3,345)
Cash, cash equivalents and restricted cash at beginning of period	31,995	37,811
Cash, cash equivalents and restricted cash at end of period	$ 36,214	$ 34,466
Cash paid (received) during the period for:		
Interest	$ 3,239	$ 1,609
Income taxes	$ 3,566	$ (2,678)

The notes to the condensed consolidated financial statements are an integral part of the above statements.

1. Basis of Reporting for Consolidated Financial Statements

The accompanying unaudited condensed consolidated financial statements of CECO Environmental Corp. and its subsidiaries (the “Company,” “CECO,” “we,” “us,” or “our”) have been prepared pursuant to the rules and regulations of the Securities and Exchange Commission (the “SEC”). Certain information and footnote disclosures normally included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America (“GAAP”) have been condensed or omitted pursuant to those rules and regulations. In the opinion of management, the accompanying unaudited condensed consolidated financial statements of the Company contain all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the financial position as of September 30, 2022 and the results of operations, cash flows and shareholders’ equity for the three months and nine months ended September 30, 2022 and 2021. The results of operations for the three months and nine months ended September 30, 2022 are not necessarily indicative of the results to be expected for the full year. The balance sheet as of December 31, 2021 has been derived from the audited consolidated financial statements included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2021 as filed with the SEC on March 14, 2022 (the “Form 10-K”).

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

These financial statements and accompanying notes should be read in conjunction with the audited financial statements and the notes thereto included in the Form 10-K.

Unless otherwise indicated, all balances within tables are in thousands, except per share amounts.

COVID-19

A novel strain of coronavirus (“COVID-19”) surfaced in late 2019 and has spread around the world, including to the United States. In March 2020, the World Health Organization characterized COVID-19 as a pandemic. As of September 30, 2022, the virus, including new emerging variants, continues to spread and has had a significant impact on worldwide economic activity, macroeconomic conditions, and the end markets of the Company's business.

The outbreak and a continued spread of COVID-19 has resulted in a substantial curtailment of business activities worldwide and has caused weakened economic conditions, both in the United States and abroad. Although vaccines are available in various countries where the Company operates, it is possible the COVID-19 pandemic may continue to have a negative impact on the Company's ongoing operations and the end markets in which it serves. However, the full impact of the COVID-19 pandemic continues to evolve as of the date of this filing, and as such, it is uncertain as to the full magnitude or lasting impact that the pandemic will have on the Company’s financial condition, liquidity, and future results of operations. Management is actively monitoring the impact of the pandemic on its financial condition, liquidity, operations, suppliers, industry, and workforce.

2. New Financial Accounting Pronouncements

Accounting Standards Adopted in Fiscal 2022

None.

Accounting Standards to be Adopted

In October 2021, the FASB issued ASU 2021-08, Business Combinations (Topic 805): Accounting for Contract Assets and Contract Liabilities from Contracts with Customers, which addresses how an acquirer should recognize and measure revenue contracts acquired in a business combination. This ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. The Company is currently evaluating the impact the adoption of the standard will have on the Company’s financial position and/or results of operations.

3. Accounts Receivable

Accounts receivable consisted of the following:

(in thousands)	September 30, 2022		December 31, 2021	
Contract receivables	$	70,580	$	65,932
Trade receivables		23,384		12,537
Allowance for doubtful accounts		(4,005)		(3,478)
Total accounts receivable	$	89,959	$	74,991

Balances billed but not paid by customers under retainage provisions in contracts within the Condensed Consolidated Balance Sheets amounted to approximately $1.4 million and $1.8 million at September 30, 2022 and December 31, 2021, respectively. Retainage receivables on contracts in progress are generally collected within a year or two subsequent to contract completion, and are recorded in either accounts receivable, net or deferred charges and other assets within the Condensed Consolidated Balance Sheets depending on timing of expected collection.

Bad debt expense was approximately $0.4 million for the three months ended September 30, 2022 and 2021, and $0.8 million and $0.5 million for the nine months ended September 30, 2022 and 2021, respectively.

4. Inventories

Inventories consisted of the following:

(in thousands)	September 30, 2022		December 31, 2021	
Raw materials	$	18,125	$	13,405
Work in process		6,925		5,147
Finished goods		2,508		674
Obsolescence allowance		(2,818)		(2,174)
Total inventories	$	24,740	$	17,052

Amounts credited to the allowance for obsolete inventory and charged to cost of sales amounted to zero and $0.2 million for the three months ended September 30, 2022 and 2021, respectively, and $0.1 million and $0.4 million for the nine months ended September 30, 2022 and 2021, respectively.

5. Goodwill and Intangible Assets

Goodwill activity for the nine months ended September 30, 2022 and the year ended December 31, 2021 was as follows:

(in thousands)	Nine months ended September 30, 2022				Year ended December 31, 2021			
Goodwill / Tradename	Goodwill		Tradename		Goodwill		Tradename	
Beginning balance	$	161,183	$	9,629	$	161,820	$	12,937
Acquisitions		24,383		—		—		—
Transfers to finite life classification		—		—		—		(3,150)
Foreign currency translation		(3,201)		(283)		(637)		(158)
Ending balance	$	182,365	$	9,346	$	161,183	$	9,629

Finite life intangible assets consisted of the following:

(in thousands)	September 30, 2022				December 31, 2021			
Intangible assets – finite life	Cost		Accum. Amort.		Cost		Accum. Amort.	
Technology	$	14,457	$	14,702	$	14,457	$	13,704
Customer lists		88,043		57,091		73,199		53,970
Tradename		11,322		3,455		9,728		2,745
Foreign currency adjustments		(3,620)		(1,141)		(2,149)		(1,025)
Total intangible assets – finite life	$	110,202	$	74,107	$	95,235	$	69,394

Finite life intangible asset activity for the nine months ended September 30, 2022 and 2021 was as follows:

(in thousands)	Nine months ended September 30, 2022	2021
Intangible assets – finite life, net at beginning of period	$ 25,841	$ 29,637
Amortization expense	(4,939)	(5,029)
Transfers from indefinite life classification	—	3,150
Acquisition	16,438	—
Foreign currency adjustments	(1,245)	(100)
Intangible assets – finite life, net at end of period	$ 36,095	$ 27,658

Amortization expense of finite life intangible assets was $2.0 million and $1.7 million for the three months ended September 30, 2022 and 2021, respectively, and $4.9 million and $5.0 million for the nine months ended September 30, 2022 and 2021, respectively. Amortization over the next five years for finite life intangibles is expected to be $1.9 million for the remainder of 2022, $6.6 million in 2023, $5.9 million in 2024, $4.8 million in 2025, and $3.5 million in 2026.

The Company completes an annual (or more often if circumstances require) goodwill and indefinite life intangible asset impairment assessment on October 1. As a part of its impairment assessment, the Company first qualitatively assesses whether current events or changes in circumstances lead to a determination that it is more likely than not (defined as a likelihood of more than 50 percent) that the fair value of a reporting unit or indefinite life intangible asset is less than its carrying amount. If there is a qualitative determination that the fair value is more likely than not greater than the carrying value, the Company does not need to quantitatively test for impairment. If this qualitative assessment indicates a more likely than not potential that the asset may be impaired, the estimated fair value is calculated. If the estimated fair value is less than carrying value, an impairment charge is recorded.

As of September 30, 2022, the Company reviewed its previous forecasts and assumptions based on its current projections, which are subject to various risks and uncertainties, including projected revenue, projected operational profit, terminal growth rates, and the cost of capital. The Company did not identify any triggering events during the three month period ended September 30, 2022 that would require an interim impairment assessment of goodwill or intangible assets.

The Company's assumptions about future conditions important to its assessment of potential impairment of its goodwill and indefinite life intangible assets, including the impacts of the COVID-19 pandemic, are subject to uncertainty, and the Company will continue to monitor these conditions in future periods as new information becomes available, and will update its analysis accordingly.

6. Accounts Payable and Accrued Expenses

Accounts payable and accrued expenses consisted of the following:

(in thousands)	September 30, 2022	December 31, 2021
Trade accounts payable, including amounts due to subcontractors	$ 65,284	$ 56,242
Compensation and related benefits	8,745	6,065
Accrued warranty	3,921	3,074
Contract liabilities	5,367	4,405
Short-term lease liability	3,198	2,414
Other	13,839	11,881
Total accounts payable and accrued expenses	$ 100,354	$ 84,081

7. Senior Debt

Debt consisted of the following:

(in thousands)	September 30, 2022	December 31, 2021
Outstanding borrowings under the Credit Facility (defined below). Term loan payable in quarterly principal installments of $550 through September 2023, and $825 through September 2025 and $1,100 thereafter with balance due upon maturity in September 2026		
- Term loan	$ 41,859	$ 43,511
- Revolving credit loan	59,700	22,000
Total outstanding borrowing under the Credit Facility	101,559	65,511
Outstanding borrowing under the joint venture term debt	10,230	—
Unamortized debt discount	(1,452)	(1,731)
Total outstanding borrowings	110,337	63,780
Less: current portion	(3,303)	(2,203)
Total debt, less current portion	$ 107,034	$ 61,577

Scheduled principal payments under the Credit Facility and joint venture term debt are $0.8 million remaining in 2022, $3.6 million in 2023, $4.9 million in 2024, $5.2 million in 2025, $93.5 million in 2026, and $3.9 million in 2027.

Credit Facility

As of September 30, 2022 and December 31, 2021, $19.4 million and $14.5 million of letters of credit were outstanding, respectively. Total unused credit availability under the Company’s senior secured term loan and senior secured revolver loan with sub-facilities for letters of credit, swing-line loans and senior secured multi-currency loans (the "Credit Facility") was $60.9 million and $45.9 million at September 30, 2022 and December 31, 2021, respectively. Revolving loans may be borrowed, repaid and reborrowed until December 17, 2026, at which time all outstanding balances of the Credit Facility must be repaid.

At the Company’s option, revolving loans and the term loans accrue interest at a per annum rate based on either the highest of (a) the federal funds rate plus 0.5%, (b) the Agent’s prime lending rate, (c) Daily Simple SOFR plus the Daily Simple SOFR Adjustment of 0.11448% plus 1.0%, or (d) 1.0%, plus a margin ranging from 1.75% to 2.75% depending on the Company’s Consolidated Leverage Ratio (“Base Rate”), or (d) a one/three/six-month Term SOFR Rate (as defined in the Credit Facility) plus the Term SOFR Adjustment ranging from 0.11% to 0.43% plus 1.75% to 2.75% depending on the Company’s Consolidated Leverage Ratio. Interest on swing line loans is the Base Rate.

Interest on Base Rate loans is payable quarterly in arrears on the last day of each calendar quarter and at maturity. Interest on Term SOFR rate loans is payable on the last date of each applicable Interest Period (as defined in the agreement), but in no event less than once every three months and at maturity. The weighted average stated interest rate on outstanding borrowings was 5.44% and 2.54% at September 30, 2022 and December 31, 2021, respectively. Under the terms of the Credit Facility, the Company is required to maintain certain financial covenants, including the maintenance of a Consolidated Net Leverage Ratio (as defined in the Credit Facility). Through September 30, 2023, the maximum Consolidated Net Leverage Ratio is 3.75, after which time it will decrease to 3.50 until the end of the term of the Credit Facility.

The Company has granted a security interest in substantially all of its assets to secure its obligations pursuant to the Credit Facility. The Company’s obligations under the Credit Facility are guaranteed by the Company’s U.S. subsidiaries and such guaranty obligations are secured by a security interest on substantially all the assets of such subsidiaries, including certain real property. The Company’s obligations under the Credit Facility may also be guaranteed by the Company’s material foreign subsidiaries to the extent no adverse tax consequences would result to the Company.

As of September 30, 2022 and December 31, 2021, the Company was in compliance with all related financial and other restrictive covenants under the Credit Facility.

Joint Venture Debt

On March 7, 2022, the Company's Effox-Flextor-Mader, Inc. joint venture ("EFM JV") entered into a loan agreement secured by the assets of the EFM JV in the aggregate principal amount of $11.0 million for the acquisition of General Rubber, LLC ("GRC"), as further described in Note 14. As of September 30, 2022, $10.2 million was outstanding under the loan. Principal will be paid back to the lender monthly with the final installment due by February 27, 2027. Interest is accrued at the per annum rate based on EFM JV's choice of the 1/3/6 month Term SOFR rate plus 3.25%, with a floor rate of 3.75%. Interest is paid monthly on the last day of each month. The interest rate at September 30, 2022 was 6.60%. As of September 30, 2022, the EFM JV was in compliance with all related financial and other restrictive covenants under this loan agreement. This loan balance does not impact the Company's borrowing capacity or the financial covenants under the Credit Facility.

Foreign Debt

The Company has a number of bank guarantee facilities and bilateral lines of credit in various foreign countries currently supported by cash, letters of credit or pledged assets and collateral under the Credit Facility. The Credit Facility allows letters of credit and bank guarantee issuances of up to $65.0 million from the bilateral lines of credit secured by pledged assets and collateral under the Credit Facility. As of September 30, 2022, $21.5 million in bank guarantees were outstanding. In addition, a subsidiary of the Company located in the Netherlands has a Euro-denominated bank guarantee agreement secured by local assets under which $0.6 million in bank guarantees were outstanding as of September 30, 2022. Additionally, a subsidiary of the Company in China recently entered into a renminbi ("RMB") denominated bank guarantee agreement secured primarily by local assets under which $0.7 million in bank guarantees were outstanding as of September 30, 2022. As of September 30, 2022, the borrowers of these facilities and agreements were in compliance with all related financial and other restrictive covenants.

8. Earnings per Share

The computational components of basic and diluted earnings per share for the three months ended September 30, 2022 and 2021 are as follows:

	Three months ended September 30,	
(in thousands)	**2022**	**2021**
Numerator (for basic and diluted earnings per share)		
Net income (loss) attributable to CECO Environmental Corp.	$ 1,943	$ (1,249)
Denominator		
Basic weighted-average shares outstanding	34,456	35,472
Common stock equivalents arising from stock options and restricted stock awards	415	—
Diluted weighted-average shares outstanding	34,871	35,472

The computational components of basic and diluted earnings per share for the nine months ended September 30, 2022 and 2021 are as follows:

	Nine months ended September 30,	
(in thousands)	**2022**	**2021**
Numerator (for basic and diluted earnings per share)		
Net income attributable to CECO Environmental Corp.	$ 9,122	$ 224
Denominator		
Basic weighted-average shares outstanding	34,791	35,463
Common stock equivalents arising from stock options and restricted stock awards	244	267
Diluted weighted-average shares outstanding	35,035	35,730

Options and restricted stock units included in the computation of diluted earnings per share are calculated using the treasury stock method. For the three months ended September 30, 2022 and 2021, 1.2 million and zero, respectively, and during the nine months ended September 30, 2022 and 2021, 1.7 million and 1.8 million, respectively, of outstanding options and restricted stock units were excluded from the computation of diluted earnings per share due to their having an anti-dilutive effect.

Once a restricted stock unit vests, it is included in the computation of weighted average shares outstanding for purposes of basic and diluted earnings per share.

Common Stock Repurchase

On May 10, 2022, the Company's Board of Directors authorized a share repurchase program under which the Company may purchase up to $20.0 million of its outstanding shares of common stock through April 30, 2025. The authorization permits the Company to repurchase shares in the open market, through accelerated share repurchases, block trades, Rule 10b5-1 trading plans or through privately negotiated transactions in accordance with applicable laws, rules and regulations. Through September 30, 2022, the Company has repurchased and retired approximately 981,000 shares of common stock at a cost of $6.5 million under the program.

On August 3, 2021, the Company's Board of Directors authorized a share repurchase program under which the Company could purchase up to $5.0 million of its outstanding shares of common stock through December 31, 2021. The authorization permitted the Company to repurchase shares in the open market, through accelerated share repurchases, block trades, Rule 10b5-1 trading plans or through privately negotiated transactions in accordance with applicable laws, rules and regulations. Through September 30, 2021, the Company repurchased approximately 520,000 shares of common stock at a cost of $3.7 million under the program. The authorization under this program has expired.

9. Share-Based Compensation

The Company accounts for share-based compensation in accordance with Accounting Standards Codification ("ASC") Topic 718, "Compensation – Stock Compensation," which requires the Company to recognize compensation expense for share-based awards, measured at the fair value of the awards at the grant date. The Company recognized $1.1 million and $0.9 million of share-based compensation related expense during the three months ended September 30, 2022 and 2021, respectively, and $2.9 million and $2.4 million during the nine months ended September 30, 2022 and 2021, respectively.

The Company granted approximately 68,000 and 5,000 restricted stock units during the three months ended September 30, 2022 and 2021, respectively, and approximately 755,000 and 465,000 restricted stock units during the nine months ended September 30, 2022 and 2021, respectively.

There were zero and 2,000 options exercised during the nine months ended September 30, 2022 and 2021, respectively. The Company received zero and $13,000 in cash from employees and a non-employee director exercising options during the nine months ended September 30, 2022 and 2021, respectively. The intrinsic value of options exercised during the nine months ended September 30, 2022 and 2021 was zero and $3,000, respectively.

10. Pension and Employee Benefit Plans

The Company sponsors a non-contributory defined benefit pension plan for certain union employees. The plan is funded in accordance with the funding requirements of the Employee Retirement Income Security Act of 1974.

The Company presents the components of net periodic benefit cost (gain) within "Other income (expense), net" on the Condensed Consolidated Statements of Operations.

Retirement plan expense is based on valuations performed by plan actuaries as of the beginning of each fiscal year. The components of the expense consisted of the following:

	Three months ended September 30,		Nine months ended September 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Pension plan:				
Interest cost	$ 219	$ 194	$ 658	$ 582
Expected return on plan assets	(390)	(378)	(1,170)	(1,133)
Amortization of net actuarial loss	66	103	197	308
Net periodic benefit gain	$ (105)	$ (81)	$ (315)	$ (243)

The Company made no contributions to its defined benefit plan during the nine months ended September 30, 2022 and 2021. For the remainder of 2022, the Company does not expect to make any contributions to fund the pension plan. The unfunded liability of the plan of $5.3 million and $5.6 million as of September 30, 2022 and December 31, 2021, respectively, is included in "Other liabilities" on the Condensed Consolidated Balance Sheets.

11. Income Taxes

The Company files income tax returns in various federal, state and local jurisdictions. Tax years from 2018 forward remain open for examination by Federal authorities. Tax years from 2016 forward remain open for all significant state and foreign authorities.

The Company accounts for uncertain tax positions pursuant to ASC Topic 740, "Income Taxes." As of September 30, 2022 and December 31, 2021, the liability for uncertain tax positions totaled approximately $0.1 million, which is included in "Other liabilities" on the Condensed Consolidated Balance Sheets. The Company recognizes accrued interest related to uncertain tax positions and penalties, if any, in income tax expense within the Condensed Consolidated Statements of Operations.

Certain of the Company's undistributed earnings of our foreign subsidiaries are not permanently reinvested. Since foreign earnings have already been subject to United States income tax in 2017 as a result of the 2017 Tax Cuts and Jobs Act, the Company intends to repatriate foreign-held cash as needed. The Company records deferred income tax attributable to foreign withholding taxes that would become payable should it decide to repatriate cash held in our foreign operations. As of September 30, 2022 and December 31, 2021, the Company recorded deferred income taxes of approximately $0.8 million and $1.1 million, respectively, on the undistributed earnings of its foreign subsidiaries.

Income tax expense was $0.3 million for the three months ended September 30, 2022 and $3.3 million for the nine months ended September 30, 2022 compared with income tax expense of $0.1 million for the three months ended September 30, 2021 and $0.8 million for the nine months ended September 30, 2021. The effective income tax rate for the three months ended September 30, 2022 was 12.7% compared with (5.6%) for the three months ended September 30, 2021. The effective income tax rate for the nine months ended September 30, 2022 was 25.3% compared with 62.7% for the nine months ended September 30, 2021. The effective income tax rates for the three and nine months ended September 30, 2022 differ from the United States federal statutory rate. The Company's effective rate is affected by certain other permanent differences, including state income taxes, non-deductible incentive stock-based compensation and differences in tax rates among jurisdictions in which it operates.

12. Financial Instruments

The Company's financial instruments consist primarily of investments in cash and cash equivalents, receivables and certain other assets, foreign debt and accounts payable, which approximate fair value at September 30, 2022 and December 31, 2021, due to their short-term nature or variable, market-driven interest rates.

The fair value of the debt issued under the Credit Facility and joint venture term loan was $111.8 million and $65.5 million at September 30, 2022 and December 31, 2021, respectively. The fair value was determined considering market conditions, the Company's credit worthiness and the current terms of our debt, which is considered Level 2 on the fair value hierarchy.

At September 30, 2022 and December 31, 2021, the Company had cash and cash equivalents of $35.2 million and $29.9 million, respectively, of which $24.2 million and $22.6 million, respectively, was held outside of the United States, principally in the Netherlands, United Kingdom, China, and Canada.

13. Commitments and Contingencies

Asbestos cases

The Company's subsidiary, Met-Pro Technologies LLC ("Met-Pro"), beginning in 2002, has been named in asbestos-related lawsuits filed against a large number of industrial companies including, in particular, those in the pump and fluid handling industries. In management's opinion, the complaints typically have been vague, general and speculative, alleging that Met-Pro, along with the numerous other defendants, sold unidentified asbestos-containing products and engaged in other related actions which caused injuries (including death) and loss to the plaintiffs. Counsel has advised that more recent cases typically allege more serious claims of mesothelioma. The Company's insurers have hired attorneys who, together with the Company, are vigorously defending these cases. Many cases have been dismissed after the plaintiff fails to produce evidence of exposure to Met-Pro's products. In those cases, where evidence has been produced, the Company's experience has been that the exposure levels are low and the Company's position has been that its products were not a cause of death, injury or loss. The Company has been dismissed from or settled a large number of these cases. Cumulative settlement payments from 2002 through September 30, 2022 for cases involving asbestos-related claims were $5.9 million, of which, together with all legal fees other than corporate counsel expenses, $5.8 million has been paid by the Company's insurers. The average cost per settled claim, excluding legal fees, was approximately $43,000.

Based upon the most recent information available to the Company regarding such claims, there were a total of 259 cases pending against the Company as of September 30, 2022 (with Illinois, New York, Pennsylvania and West Virginia having the largest number of cases), as compared with 223 cases that were pending as of December 31, 2021. During the nine months ended September 30, 2022, 108 new cases were filed against the Company, and the Company was dismissed from 51 cases and settled 21 cases. Most of the pending cases have not advanced beyond the early stages of discovery, although a number of cases are on schedules leading to or scheduled for trial. The Company believes that its insurance coverage is adequate for the cases currently pending against the Company and for the foreseeable future, assuming a continuation of the current volume, nature of cases and settlement amounts. However, the Company has no control over the number and nature of cases that are filed against it, nor as to the financial health of its insurers or their position as to coverage. The Company also presently believes that none of the pending cases will have a material adverse impact upon the Company's results of operations, liquidity or financial condition.

Other

The Company is also a party to routine contract and employment-related litigation matters, warranty claims and routine audits of state and local tax returns arising in the ordinary course of its business.

The final outcome and impact of open matters, and related claims and investigations that may be brought in the future, are subject to many variables, and cannot be predicted. In accordance with ASC 450, "Contingencies," and related guidance, the Company records accruals for estimated losses relating to claims and lawsuits when available information indicates that a loss is probable and the amount of the loss, or range of loss, can be reasonably estimated. The Company expenses legal costs as they are incurred.

The Company is not aware of any pending claims or assessments, other than as described above, which may have a material adverse impact on its liquidity, financial position, results of operations, or cash flows.

14. Acquisitions and Joint Ventures

General Rubber LLC

On March 7, 2022, the Company, through the EFM JV, acquired 100% of the equity interests of General Rubber LLC ("GRC") for $19.7 million in cash, which was financed with a combination of a draw on the Company's revolving credit facility and issuance of term debt by the EFM JV (see Note 7). As additional consideration, the former owners of GRC were issued 10% of the equity interest in the EFM JV, resulting in the Company holding 63% of the equity in the joint venture. The fair value ascribed to the equity interest of the former owners of GRC was approximately $4.1 million. During the nine months ended September 30, 2022, the Company recorded an adjustment of $0.9 million to the fair value of the equity interest, as reflected in the Condensed Consolidated Statement of Shareholders' Equity. As of September 30, 2022, there were $13.7 million in current assets, $28.1 million in long-lived assets, and $30.5 million in total liabilities related to the EFM JV included in the Condensed Consolidated Balance Sheets.

GRC engineers and manufactures non-metallic expansion joints and flow control products including rubber expansion joints, ducting expansion joints, and industrial pinch and duck bill valves, serving the industrial water and wastewater markets. The acquisition diversifies and expands the EFM JV product offerings within the Engineered Systems segment. The following table summarizes the fair values of the assets acquired and liabilities assumed at the date of closing.

(in thousands)		
Current assets (including cash of $137)	$	4,963
Property and equipment		459
Goodwill		11,120
Intangible - finite life		8,380
Total assets acquired		24,922
Current liabilities assumed		(714)
Deferred income tax liability		(388)
Net assets acquired	$	23,820

During the three and nine months ended September 30, 2022, GRC accounted for $3.9 million and $8.3 million in revenue, respectively, and $0.7 million and $1.5 million, respectively, of net income included in the Company's results.

Compass Water Solutions, Inc.

On May 3, 2022, the Company acquired 100% of the equity interests of Compass Water Solutions, Inc. ("Compass") for $9.0 million in cash, which was financed with a draw on the Company's revolving credit facility, and $2.0 million in notes payable to the former owners over two years. As additional consideration, the former owners are entitled to earn-out payments based upon a multiple of specified financial results through April 30, 2023. Based on projections at the acquisition date, the Company estimated the fair value of the earn-out to be $1.4 million. As of September 30, 2022, the earnout liability recorded in "Accounts payable and accrued expenses" on the Condensed Consolidated Balance Sheets is $1.4 million.

Compass is a leading global supplier of membrane-based industrial water and wastewater treatment systems that help customers achieve regulatory compliance of water discharge at the lowest lifecycle cost. The acquisition diversifies and expands the Company's industrial water product offerings within our Engineered Systems segment. The following table summarizes the fair values of the assets acquired and liabilities assumed at the date of closing.

(in thousands)		
Current assets (including cash of $334)	$	4,796
Property and equipment		101
Goodwill		4,848
Intangible - finite life		4,900
Total assets acquired		14,645
Current liabilities assumed		(623)
Deferred income tax liability		(1,627)
Net assets acquired	$	12,395

During the three and nine months ended September 30, 2022, Compass accounted for $1.5 million and $2.3 million in revenue, respectively, and $0.1 million and $0.2 million, respectively, of net loss included in the Company's results.

Western Air Ducts Ltd.

On June 22, 2022, the Company acquired 100% of the equity interests of Western Air Ducts Limited for $10.7 million in cash, which was financed with a draw on the Company's revolving credit facility, and deferred cash consideration of $0.8 million payable in one year. The deferred consideration is recorded in "Accounts payable and accrued expenses" on the Condensed Consolidated Balance Sheets.

Western Air Ducts is a leading European supplier of dust and fume extraction solutions, providing consultation, design, manufacturing, installation, and service. The acquisition diversifies and expands the Company's industrial air product offerings within the Industrial Process Solutions segment. The following table summarizes the fair values of the assets acquired and liabilities assumed at the date of closing.

(in thousands)		
Current assets (including cash of $1,557)	$	2,711
Property and equipment		188
Goodwill		7,344
Intangible - finite life		3,158
Total assets acquired		13,401
Current liabilities assumed		(1,127)
Deferred income tax liability		(824)
Net assets acquired	$	11,450

During the three and nine months ended September 30, 2022, Western Air Ducts accounted for $0.7 million in revenue and $0.2 million of net loss included in the Company's results.

DS21 Co., Ltd.

On September 19, 2022, the Company acquired 100% of the equity interests of DS21 Co., Ltd. ("DS21") for $9.2 million, including 8.9 million in cash, which was financed with a draw on the Company's revolving credit facility, and deferred cash consideration of $0.3 million payable in one year.

DS21 is a South Korean-based design and manufacturing firm specializing in innovative water and wastewater treatment solutions. The addition of DS21 advances the Company's leadership position in niche oily water and produced water treatment, demineralization water treatment and ultra-pure water supply applications within the Company's Engineered Systems segment. The following table summarizes the fair values of the assets acquired and liabilities assumed at the date of closing.

(in thousands)		
Current assets (including cash of $1,453)	$	5,099
Property and equipment		4,020
Goodwill		1,071
Other assets		169
Total assets acquired		10,359
Current liabilities assumed		(1,008)
Other liabilities		(113)
Net assets acquired	$	9,238

The approximate fair values of the assets acquired and liabilities assumed related to the acquisitions are based on preliminary estimates and assumptions. These preliminary estimates and assumptions could change significantly during the purchase price measurement period as the Company finalizes the valuation of assets acquired and liabilities assumed. These changes could result in material variances between the Company's future financial results, including variances in the estimated purchase price, fair values recorded and expenses associated with these items.

Goodwill recognized represents value the Company expects to be created by combining the various operations of the acquired businesses with the Company’s operations, including the expansion into markets within existing business segments, access to new customers and potential cost savings and synergies. Goodwill related to these acquisitions is not deductible for tax purposes.

Acquisition and integration expenses on the Condensed Consolidated Statements of Operations are related to acquisition activities, which include retention, legal, accounting, banking, and other expenses.

The following unaudited pro forma financial information represents the Company’s results of operations as if the GRC, Compass, Western Air Ducts, and DS21 acquisitions had occurred on January 1, 2021:

	Three months ended September 30,		Nine months ended September 30,	
(in thousands, except per share data)	2022	2021	2022	2021
Net sales	$ 110,139	$ 86,945	$ 318,814	$ 256,072
Net income (loss) attributable to CECO Environmental Corp.	1,985	(319)	9,767	2,660
Earnings per share:				
Basic	$ 0.06	$ (0.01)	$ 0.28	$ 0.08
Diluted	$ 0.06	$ (0.01)	$ 0.28	$ 0.07

The pro forma results have been prepared for informational purposes only and include adjustments to amortize acquired intangible assets with finite life, reflect additional interest expense on debt used to fund the acquisition, and to record the income tax consequences of the pro forma adjustments. These pro forma results do not purport to be indicative of the results of operations that would have occurred had the purchase been made as of the beginning of the periods presented or of the results of operations that may occur in the future.

15. Business Segment Information

The Company’s operations are organized and reviewed by management along with its solutions or end markets that the segment serves and presented in two reportable segments. The results of the segments are reviewed through the “Income from operations” line on the Condensed Consolidated Statements of Operations.

The Company’s reportable segments are organized as groups of similar products and services, as described as follows:

Engineered Systems segment: The Engineered Systems segment serves the general industrial, power generation, refinery, water/wastewater, midstream oil & gas, and other energy transition markets. The Company is a key part of helping meet the global demand for environmental and equipment protection through our highly engineered platforms including emissions management, fluid bed cyclones, thermal acoustics, separation & filtration (gas & water), and dampers & expansion joints.

Industrial Process Solutions segment: The Industrial Process Solutions segment serves the broad industrial air pollution control, beverage can, fluid handling, electric vehicle production, food and beverage, semi-conductor, process filtration, pharmaceutical, petrochemical, wastewater treatment, wood manufacturing, desalination, and aquaculture markets. The

Company protects the air we collectively breathe, maintains clean and safe operations for employees, lowers energy consumption, minimizes waste for customers, and ensures they meet regulatory compliance standards for toxic emissions, fumes, volatile organic compounds and odors through our platforms including duct & installation, industrial air, and fluid handling.

The financial segment information is as follows:

(in thousands)	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Net sales (less intra-, inter-segment sales)				
Engineered Systems segment	$ 65,630	$ 44,779	$ 189,938	$ 130,196
Industrial Process Solutions segment	42,784	35,200	116,287	100,355
Total net sales	$ 108,414	$ 79,979	$ 306,225	$ 230,551

(in thousands)	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Income (loss) from operations				
Engineered Systems segment	$ 8,991	$ 4,301	$ 24,467	$ 16,105
Industrial Process Solutions segment	5,226	2,669	14,847	10,932
Corporate and Other[(1)]	(11,444)	(7,566)	(25,591)	(22,434)
Total income (loss) from operations	$ 2,773	$ (596)	$ 13,723	$ 4,603

(1) Includes corporate compensation, professional services, information technology, and other general and administrative corporate expenses.

(in thousands)	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Property and equipment additions				
Engineered Systems segment	$ 96	$ 15	$ 128	$ 79
Industrial Process Solutions segment	330	241	743	603
Corporate and Other	508	487	1,496	1,058
Total property and equipment additions	$ 934	$ 743	$ 2,367	$ 1,740

(in thousands)	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Depreciation and amortization				
Engineered Systems segment	$ 1,398	$ 1,061	$ 3,253	$ 3,198
Industrial Process Solutions segment	1,153	1,070	3,212	3,212
Corporate and Other	390	336	1,144	963
Total depreciation and amortization	$ 2,941	$ 2,467	$ 7,609	$ 7,373

(in thousands)	September 30, 2022	December 31, 2021
Identifiable assets		
Engineered Systems segment	$ 320,261	$ 262,558
Industrial Process Solutions segment	149,311	141,975
Corporate and Other[(2)]	16,657	11,664
Total identifiable assets	$ 486,229	$ 416,197

(2) Corporate and Other assets consist primarily of cash and income tax related assets.

(in thousands)	September 30, 2022	December 31, 2021
Goodwill		
Engineered Systems segment	$ 115,282	$ 99,303
Industrial Process Solutions segment	67,083	61,880
Total goodwill	$ 182,365	$ 161,183

Intra-segment and Inter-segment Revenues

The Company has multiple divisions that sell to each other within segments (intra-segment sales) and between segments (inter-segment sales), as follows:

	Three months ended September 30, 2022				
			Less Inter-Segment Sales		
(in thousands)	Total Sales	Intra-Segment Sales	Industrial Process Solutions	Engineered Systems	Net Sales to Outside Customers
Net sales					
Engineered Systems segment	$ 68,738	$ (2,904)	$ (204)	$ —	$ 65,630
Industrial Process Solutions segment	44,079	(1,126)	—	(169)	42,784
Total net sales	$ 112,817	$ (4,030)	$ (204)	$ (169)	$ 108,414

	Three months ended September 30, 2021				
			Less Inter-Segment Sales		
(in thousands)	Total Sales	Intra-Segment Sales	Industrial Process Solutions	Engineered Systems	Net Sales to Outside Customers
Net sales					
Engineered Systems segment	$ 45,559	$ (472)	$ (308)	$ —	$ 44,779
Industrial Process Solutions segment	35,525	(308)	—	(17)	35,200
Total net sales	$ 81,084	$ (780)	$ (308)	$ (17)	$ 79,979

	Nine months ended September 30, 2022				
			Less Inter-Segment Sales		
(in thousands)	Total Sales	Intra-Segment Sales	Industrial Process Solutions	Engineered Systems	Net Sales to Outside Customers
Net sales					
Engineered Systems segment	$ 201,092	$ (10,693)	$ (461)	$ —	$ 189,938
Industrial Process Solutions segment	121,122	(4,468)	—	(367)	116,287
Total net sales	$ 322,214	$ (15,161)	$ (461)	$ (367)	$ 306,225

	Nine months ended September 30, 2021				
			Less Inter-Segment Sales		
(in thousands)	Total Sales	Intra-Segment Sales	Industrial Process Solutions	Engineered Systems	Net Sales to Outside Customers
Net sales					
Engineered Systems segment	$ 137,104	$ (6,359)	$ (549)	$ —	$ 130,196
Industrial Process Solutions segment	109,703	(8,363)	—	(985)	100,355
Total net sales	$ 246,807	$ (14,722)	$ (549)	$ (985)	$ 230,551

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

The Company's Condensed Consolidated Statements of Operations for the three month and nine months ended September 30, 2022 and 2021 reflect the consolidated operations of the Company and its subsidiaries.

CECO Environmental Corp. ("CECO," "we," "us," or the "Company") is a leading environmentally focused, diversified industrial company whose solutions protect people, the environment, and industrial equipment. We focus on engineering, designing, building, and installing systems that capture, clean and destroy air- and water-borne emissions from industrial facilities as well as fluid handling, gas and water separation, and filtration systems. CECO provides innovative technology and application expertise that helps companies grow their businesses with safe, clean, and more efficient solutions to protect our shared environment.

CECO serves diverse industries globally by working to improve air and water quality, protect customer's equipment, and provide customized engineered solutions in our customers' mission critical applications. The industries CECO serves include power generation, petrochemical processing, general industrial, refining, midstream oil & gas, electric vehicle production, poly silicon fabrication, battery recycling, and wastewater treatment, along with a wide range of other industries.

COVID-19 and Other Market Pressures

A novel strain of coronavirus ("COVID-19") surfaced in late 2019 and has spread around the world, including to the United States. In March 2020, the World Health Organization characterized COVID-19 as a pandemic. The COVID-19 pandemic persists in geographic areas in which we have operations, suppliers, customers and employees, and has had a significant impact on worldwide economic activity, macroeconomic conditions, and the end markets of our business.

As a key supplier to critical infrastructure projects, CECO has worked to maintain ongoing operations. We continue to operate our business in compliance with applicable state and local laws and are observing recommended Centers for Disease Control and Prevention guidelines to minimize the risk of spreading the COVID-19 virus including implementing, where possible, work-from-home procedures and additional sanitization efforts. This allows us to continue to serve our customers, however, the COVID-19 pandemic has also disrupted our international operations. Some of our facilities and our suppliers have experienced temporary disruptions as a result of the COVID-19 pandemic, and we continue to work closely with our global supply chain to proactively support customers during this critical time. We cannot predict whether our facilities will experience more significant disruptions in the future or the impact on our customers, vendors, or suppliers.

Although vaccines are available in various countries where we operate, health concern risks remain and notwithstanding the Company's continued efforts, it is possible the COVID-19 pandemic could further impact our operations and the operations of our customers, vendors and suppliers, particularly in light of newly emerging variant strains of the virus becoming more dominant and the potential resumption of high levels of infection and hospitalization. We cannot predict whether any of our manufacturing facilities, other operations or suppliers will be disrupted by these events, or how long such disruptions would last. COVID-19 has had and may have further negative impacts on our operations, customers and supply chain despite the preventative and precautionary measures being taken.

The senior management team meets regularly to review and assess the status of the Company's operations and the health and safety of its employees. The senior management team continues to monitor and manage the Company's ability to operate effectively as the result of the pandemic and other market pressures. In particular, we are currently experiencing shortages of raw materials and inflationary pressures for certain materials and labor. We expect these supply chain challenges and cost impacts to continue for the foreseeable future as markets recover. Although we have secured additional raw materials from existing and alternate suppliers and have taken other mitigating actions to mitigate supply disruptions, we cannot guarantee that we can continue to do so in the future. In this event, our business, results and financial condition could be adversely affected.

Note Regarding Use of Non-GAAP Financial Measures

The Company's unaudited condensed consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("GAAP"). These GAAP financial statements include certain charges the Company believes are not indicative of its core ongoing operational performance.

As a result, the Company provides financial information in this Management's Discussion and Analysis that was not prepared in accordance with GAAP and should not be considered as an alternative to the information prepared in accordance with GAAP. The Company provides this non-GAAP financial information because the Company's management utilizes it to evaluate its ongoing financial performance and the Company believes it provides greater transparency to investors as supplemental information to its GAAP results.

The Company has provided the non-GAAP financial measures of non-GAAP operating income and non-GAAP operating margin as a result of items that the Company believes are not indicative of its ongoing operations. These include transactions associated with the Company's acquisitions, divestitures and the items described below in "Consolidated Results." The Company believes that evaluation of its financial performance compared with prior and future periods can be enhanced by a presentation of results that exclude the impact of these items. The Company has incurred substantial expense and income associated with the acquisition and divestitures. While the Company cannot predict the exact timing or amounts of such charges, it does expect to treat the financial impact of these transactions as special items in its future presentation of non-GAAP results.

Results of Operations

Consolidated Results

Our Condensed Consolidated Statements of Operations for the three month and nine months ended September 30, 2022 and 2021 are as follows:

	Three months ended September 30,		Nine months ended September 30,	
(in millions, except ratios)	**2022**	**2021**	**2022**	**2021**
Net sales	$ 108.4	$ 80.0	$ 306.2	$ 230.6
Cost of sales	76.0	57.3	215.7	158.2
Gross profit	$ 32.4	$ 22.7	$ 90.5	$ 72.4
Percent of sales	*29.9%*	*28.4%*	*29.6%*	*31.4%*
Selling and administrative expenses	25.1	20.9	66.8	60.9
Percent of sales	*23.2%*	*26.1%*	*21.8%*	*26.4%*
Amortization and earnout expenses	2.0	1.8	4.9	5.8
Restructuring expenses	—	0.4	0.1	0.7
Acquisition and integration expenses	1.3	0.2	3.8	0.4
Executive transition expenses	1.2	—	1.2	—
Operating income	$ 2.8	$ (0.6)	$ 13.7	$ 4.6
Operating margin	*2.6%*	*(0.8)%*	*4.5%*	*2.0%*

To compare operating performance between the three month and nine months ended September 30, 2022 and 2021, the Company has adjusted GAAP operating income to exclude (1) amortization of intangible assets, earnout and retention expenses, (2) restructuring expenses primarily relating to severance, facility exits, and associated legal expenses, (3) acquisition and integration expenses, which include legal, accounting, and other expenses, and (4) executive transition expense, including severance for its former Chief Financial Officer and Senior Vice President of Human Resources, as well as fees and expenses incurred in the search for, and hiring of, a new Chief Financial Officer.

The following table presents the reconciliation of GAAP operating income and GAAP operating margin to non-GAAP operating income and non-GAAP operating margin:

(in millions, except ratios)	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Operating income as reported in accordance with GAAP	$ 2.8	$ (0.6)	$ 13.7	$ 4.6
Operating margin in accordance with GAAP	*2.6%*	*(0.8)%*	*4.5%*	*2.0%*
Amortization and earnout expenses	2.0	1.8	4.9	5.8
Restructuring expenses	—	0.4	0.1	0.7
Acquisition and integration expenses	1.3	0.2	3.8	0.4
Executive transition expenses	1.2	—	1.2	—
Non-GAAP operating income	$ 7.3	$ 1.8	$ 23.7	$ 11.5
Non-GAAP operating margin	*6.7%*	*2.3%*	*7.7%*	*5.0%*

Net sales for the three months ended September 30, 2022 increased $28.4 million, or 35.5%, to $108.4 million compared with $80.0 million for the three months ended September 30, 2021. The increase is broad-based, led by increases of $8.9 million in our thermal acoustics technologies, $7.6 million across our entire industrial process solutions platforms, $4.6 million in our damper and expansion products, and $2.6 million in our separation and filtration technologies. Approximately 80%, or $22.4 million, of the increase in net sales is attributable to organic revenue growth, while $6.0 million is attributable to current year acquisitions.

Net sales for the nine months ended September 30, 2022 increased $75.6 million, or 32.8%, to $306.2 million compared with $230.6 million for the nine months ended September 30, 2021. The increase is broad-based, led by increases of $20.5 million in our thermal acoustics technologies, $16.0 million across our entire industrial process solutions platforms, $14.6 million in our emissions management technologies, $12.1 million in our damper and expansion products, and $8.2 million in our engineered cyclone systems. Approximately 85%, or $64.3 million, of the increase in net sales is attributable to organic revenue growth, while $11.3 million is attributable to current year acquisitions.

Gross profit increased $9.7 million, or 42.7%, to $32.4 million in the three months ended September 30, 2022 compared with $22.7 million in the three months ended September 30, 2021. The increase in gross profit is primarily attributable to the increase in sales volume as described above. Gross profit as a percentage of sales increased 1.5% to 29.9% in the three months ended September 30, 2022 compared with 28.4% in the three months ended September 30, 2021 due to price increases and higher project margin mix executed during the three month period ended September 30, 2022, partially offset by inflation and supply chain challenges.

Gross profit increased $18.1 million, or 25.0%, to $90.5 million in the nine months ended September 30, 2022 compared with $72.4 million in the nine months ended September 30, 2021. The increase in gross profit is primarily attributable to the increase in sales volume as describe above. Gross profit as a percentage of sales decreased to 29.6% in the nine months ended September 30, 2022 compared with 31.4% in the nine months ended September 30, 2021 due to inflation, supply chain challenges, and lower project margin mix executed during the nine months ended September 30, 2022, partially offset by price increases. We continue to experience shortages of raw materials and inflationary pressures for certain materials and labor. We expect these supply chain challenges and cost impacts to continue for the foreseeable future as markets recover. Although we have secured additional raw materials from existing and alternate suppliers and have taken other mitigating actions to mitigate supply disruptions, such as implementing price increases and applying material surcharges. We cannot guarantee that we can continue to do so in the future. In this event, our business, results and financial condition could be adversely affected.

Orders booked increased $9.1 million, or 9.8%, to $101.7 million during the three months ended September 30, 2022 compared with $92.6 million in the three months ended September 30, 2021. The increase is primarily attributable to increases of $12.3 million in our separation and filtration technologies and $2.3 million in our damper and expansion products partially offset by a decrease of $4.4 million in our industrial air control technologies. For the $9.1 million increase in orders, $3.3 million is attributable to organic growth, while $5.8 million is attributable to current year acquisitions.

Orders booked increased $106.0 million, or 39.2%, to $376.2 million during the nine months ended September 30, 2022 compared with $270.2 million during the nine months ended September 30, 2021. The increase is primarily attributable to increases of $49.4 million in our separation and filtration technologies, $25.1 million in our thermal acoustics technologies and $23.5 million in industrial air control technologies. For the $106.0 million increase in orders, approximately 90%, or $94.3 million, is attributable to organic growth, while $11.7 million is attributable to current year acquisitions.

Selling and administrative expenses were $25.1 million for the three months ended September 30, 2022 compared with $20.9 million for the three months ended September 30, 2021. The increase is primarily attributable to acquisitions during 2022, as well as increased headcount in order to support expected revenue growth. Selling and administrative expenses as a percentage of sales was 23.2% in the three months ended September 30, 2022 compared with 26.1% in the three months ended September 30, 2021. The decrease in percentage is primarily attributable to gaining operating leverage on increased organic revenues.

Selling and administrative expenses were $66.8 million for the nine months ended September 30, 2022 compared with $60.9 million for the nine months ended September 30, 2021. The increase is primarily attributable to acquisitions during 2022, as well as increased headcount in order to support expected revenue growth. Selling and administrative expenses as a percentage of sales was 21.8% in the nine months ended September 30, 2022 compared with 26.4% in the nine months ended September 30, 2021. The decrease in percentage is primarily attributable to gaining operating leverage on increased organic revenues.

Amortization and earnout expense was $2.0 million for the three months ended September 30, 2022 compared with $1.8 million for the three months ended September 30, 2021. The increase in expense is attributable to a $0.3 million increase in definite lived asset amortization, partially offset by a decrease of $0.1 million in earnout expense.

Amortization and earnout expense was $4.9 million for the nine months ended September 30, 2022 compared with $5.8 million for the nine months ended September 30, 2021. The decrease in expense is attributable to a decrease of $0.8 million in earnout expense and $0.1 million decrease in definite lived asset amortization.

Operating income increased $3.4 million to $2.8 million for the three months ended September 30, 2022 compared with operating loss of $0.6 million for the three months ended September 30, 2021. Operating income increased $9.1 million to $13.7 million for the nine months ended September 30, 2022 compared with $4.6 million for the nine months ended September 30, 2021. The increase in operating income for the three and nine months ended September 30, 2022 is primarily attributable to increases in organic sales.

Non-GAAP operating income was $7.3 million for the three months ended September 30, 2022 compared with $1.8 million for the three months ended September 30, 2021. The increase of $5.5 million in non-GAAP operating income is primarily attributable to the increase in net organic sales. Non-GAAP operating income as a percentage of sales increased to 6.7% for the three months ended September 30, 2022 from 2.3% for the three months ended September 30, 2021.

Non-GAAP operating income was $23.7 million for the nine months ended September 30, 2022 compared with $11.5 million for the nine months ended September 30, 2021. The increase of $12.2 million in non-GAAP operating income is primarily attributable to the increase in net organic sales. Non-GAAP operating income as a percentage of sales increased to 7.7% for the nine months ended September 30, 2022 from 5.0% for the nine months ended September 30, 2021.

Interest expense increased to $1.6 million in the three months ended September 30, 2022 and $3.5 million for the nine months ended September 30, 2022 compared with interest expense of $0.7 million in the three months ended September 30, 2021 and $2.2 million for the nine months ended September 30, 2021. The increase in interest expense is primarily due to increased debt balances.

Income tax expense was $0.3 million for the three months ended September 30, 2022 and $3.3 million for the nine months ended September 30, 2022 compared with income tax expense of $0.1 million for the three months ended September 30, 2021 and $0.8 million for the nine months ended September 30, 2021. The effective income tax rate for the three months ended September 30, 2022 was 12.7% compared with (5.6)% for the three months ended September 30, 2021. The effective income tax rate for the nine months ended September 30, 2022 was 25.3% compared with 62.7% for the nine months ended September 30, 2021. The effective income tax rates for the three and nine months ended September 30, 2022 differ from the United States federal statutory rate. Our effective tax rate is affected by certain other permanent differences, including state income taxes, non-deductible incentive stock-based compensation, and differences in tax rates among the jurisdictions in which we operate.

Business Segments

The Company’s operations are organized and reviewed by management along its product lines or end market that the segment serves and are presented in two reportable segments. The results of the segments are reviewed through “Income from operations” on the unaudited Condensed Consolidated Statements of Operations.

	Three months ended September 30,		Nine months ended September 30,	
(in thousands)	**2022**	**2021**	**2022**	**2021**
Net sales (less intra-, inter-segment sales)				
Engineered Systems segment	$ 65,630	$ 44,779	$ 189,938	$ 130,196
Industrial Process Solutions segment	42,784	35,200	116,287	100,355
Total net sales	$ 108,414	$ 79,979	$ 306,225	$ 230,551

(in thousands)	Three months ended September 30, 2022	Three months ended September 30, 2021	Nine months ended September 30, 2022	Nine months ended September 30, 2021
Income (loss) from operations				
Engineered Systems segment	$ 8,991	$ 4,301	$ 24,467	$ 16,105
Industrial Process Solutions segment	5,226	2,669	14,847	10,932
Corporate and Other[(1)]	(11,444)	(7,566)	(25,591)	(22,434)
Total income (loss) from operations	$ 2,773	$ (596)	$ 13,723	$ 4,603

(1) Includes corporate compensation, professional services, information technology and other general and administrative corporate expenses.

Engineered Systems Segment

Our Engineered Systems segment net sales increased $20.8 million to $65.6 million for the three months ended September 30, 2022 compared with $44.8 million for the three months ended September 30, 2021. The increase is broad-based, led by increases of $8.9 million in our thermal acoustics technologies, $4.6 million in our damper and expansion products, $2.6 million in our separation and filtration technologies, $1.7 million in our engineered cyclone systems, $1.5 million in our industrial water technologies and $1.5 million in our emissions management technologies. Approximately 75%, or $15.5 million, of the increase in net sales is attributable to organic revenue growth, while $5.3 million is attributable to current year acquisitions.

Our Engineered Systems segment net sales increased $59.7 million to $189.9 million for the nine months ended September 30, 2022 compared with $130.2 million for the nine months ended September 30, 2021. The increase is broad-based, led by increases of $20.5 million in our thermal acoustics technologies, $14.6 million in our emissions management technologies, $12.1 million in our damper and expansion products, and $8.2 million in our engineered cyclone systems. Approximately 80%, or $49.1 million, of the increase in net sales is attributable to organic revenue growth, while $10.6 million is attributable to current year acquisitions.

Operating income for the Engineered Systems segment increased $4.7 million to $9.0 million for the three months ended September 30, 2022 compared with $4.3 million for the three months ended September 30, 2021. The operating income increase is primarily attributable to higher gross profit related to increased sales of $20.8 million.

Operating income for the Engineered Systems segment increased $8.4 million to $24.5 million for the nine months ended September 30, 2022 compared with $16.1 million for the nine months ended September 30, 2021. The operating income increase is primarily attributable to higher gross profit related to increased sales of $59.7 million.

Industrial Process Solutions Segment

Our Industrial Process Solutions segment net sales increased $7.6 million to $42.8 million for the three months ended September 30, 2022 compared with $35.2 million for the three months ended September 30, 2021. The increase is primarily attributable to increases across all products serving industrial air end markets. Approximately 90%, or $7.0 million, of the increase in net sales is attributable to organic revenue growth, while $0.7 million is attributable to current year acquisitions.

Our Industrial Process Solutions segment net sales increased $15.9 million to $116.3 million for the nine months ended September 30, 2022 compared with $100.4 million for the nine months ended September 30, 2021. The increase is primarily attributable to increases across all products serving industrial air end markets. Approximately 95%, or $15.2 million, of the increase in net sales is attributable to organic revenue growth, while $0.7 million is attributable to current year acquisitions.

Operating income for the Industrial Process Solutions segment increased $2.5 million to $5.2 million for the three months ended September 30, 2022 compared with $2.7 million for the three months ended September 30, 2021. The increase is primarily attributable to higher gross profit related to increased sales of $7.6 million, offset by a $1.3 million increase in selling and administrative expense.

Operating income for the Industrial Process Solutions segment increased $3.9 million to $14.8 million for the nine months ended September 30, 2022 compared with $10.9 million for the nine months ended September 30, 2021. The increase is primarily attributable to higher gross profit related to increased sales of $15.9 million, offset by a $2.8 million increase in selling and administrative expense.

Corporate and Other Segment

Operating expense for the Corporate and Other segment increased $3.8 million to $11.4 million for the three months ended September 30, 2022 compared with $7.6 million for the three months ended September 30, 2021. The increase is primarily attributable to inflationary increases for wages and services, and executive transition expenses of $1.2 million.

Operating expense for the Corporate and Other segment increased $3.2 million to $25.6 million for the nine months ended September 30, 2022 compared with $22.4 million for the nine months ended September 30, 2021. The increase is primarily attributed to inflationary increases for wages and services and executive transition expenses of $1.2 million, partially offset by a $2.5 million favorable insurance settlement received in the first quarter of 2022.

Backlog

Backlog (i.e., unfulfilled or remaining performance obligations) represents the sales we expect to recognize for our products and services for which control has not yet transferred to the customer. Backlog increased to $277.7 million as of September 30, 2022 from $213.9 million as of December 31, 2021. Our customers may have the right to cancel a given order. Historically, cancellations have not been common. Backlog is adjusted on a quarterly basis for adjustments in foreign currency exchange rates. Substantially all backlog is expected to be delivered within 12 to 18 months. Backlog is not defined by GAAP and our methodology for calculating backlog may not be consistent with methodologies used by other companies.

New Accounting Pronouncements

For information regarding recent accounting pronouncements, see Note 2 to the unaudited condensed consolidated financial statements within Item 1 of this Quarterly Report on Form 10-Q.

Liquidity and Capital Resources

When we undertake large jobs, our working capital objective is to make these projects self-funding. We work to achieve this by obtaining initial down payments, progress billing contracts, when possible, utilizing extended payment terms from material suppliers, and paying sub-contractors after payment from our customers, which is an industry practice. Our investment in net working capital is funded by cash flow from operations and by our revolving line of credit under our Credit Facility (as defined below).

At September 30, 2022, the Company had working capital of $82.9 million, compared with $72.3 million at December 31, 2021. The ratio of current assets to current liabilities was 1.59 to 1.00 on September 30, 2022, as compared with a ratio of 1.62 to 1.00 at December 31, 2021.

At September 30, 2022 and December 31, 2021, cash and cash equivalents totaled $35.2 million and $29.9 million, respectively. As of September 30, 2022 and December 31, 2021, $24.2 million and $22.6 million, respectively, of our cash and cash equivalents were held by certain non-United States subsidiaries, as well as being denominated in foreign currencies.

Debt consisted of the following:

(in thousands)	**September 30, 2022**	**December 31, 2021**
Outstanding borrowings under the Credit Facility (defined below). Term loan payable in quarterly principal installments of $550 through September 2023, and $825 through September 2025 and $1,100 thereafter with balance due upon maturity in September 2026		
- Term loan	$ 41,859	$ 43,511
- Revolving Credit Loan	59,700	22,000
Total outstanding borrowings under the Credit Facility	101,559	65,511
Outstanding borrowings under the joint venture term debt	10,230	—
Unamortized debt discount	(1,452)	(1,731)
Total outstanding borrowings	$ 110,337	$ 63,780
Less: current portion	(3,303)	(2,203)
Total debt, less current portion	$ 107,034	$ 61,577

Credit Facility

The Company's outstanding borrowings in the United States consist of a senior secured term loan and a senior secured revolver loan with sub-facilities for letters of credit, swing-line loans and multi-currency loans (collectively, the "Credit Facility"). As of September 30, 2022 and December 31, 2021, the Company was in compliance with all related financial and other restrictive covenants under the Credit Facility.

See Note 7 to the unaudited condensed consolidated financial statements within Item 1 of this Quarterly Report on Form 10-Q for further information on the Company's debt facilities.

Total unused credit availability under our existing Credit Facility is as follows:

(in millions)	September 30, 2022	December 31, 2021
Credit Facility, revolving loans	$ 140.0	$ 140.0
Draw down	(59.7)	(22.0)
Letters of credit open	(19.4)	(14.5)
Total unused credit availability	$ 60.9	$ 103.5
Amount available based on borrowing limitations	$ 60.9	$ 45.9

Overview of Cash Flows and Liquidity

	For the nine months ended September 30,	
(dollars in thousands)	2022	2021
Net cash provided by operating activities	$ 19,696	$ 10,232
Net cash used in investing activities	(47,260)	(1,207)
Net cash provided by (used in) financing activities	38,242	(11,835)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(6,459)	(535)
Net increase (decrease) in cash, cash equivalents and restricted cash	$ 4,219	$ (3,345)

Operating Activities

For the nine months ended September 30, 2022, $19.7 million of cash was provided by operating activities compared with $10.2 million provided by operations in the prior year period, a $9.5 million increase. Cash flow from operating activities in the first nine months of 2022 had a favorable impact year-over-year primarily due to an increase in net income and certain improvements in net working capital.

Investing Activities

For the nine months ended September 30, 2022, net cash used in investing activities was $47.3 million compared with $1.2 million used in investing activities in the prior year period. For the nine months ended September 30, 2022, the $47.3 million cash used in investing activities was the result of $44.9 million cash used for the acquisitions as described in Note 14, and $2.4 million for the acquisition of property and equipment. In the prior year period, cash flow of $1.2 million used in investing activities was the result of $1.7 million used for the acquisition of property and equipment, offset by proceeds from the disposal of assets held for sale of $0.5 million.

Financing Activities

For the nine months ended September 30, 2022, $38.2 million was provided by financing activities compared with $11.8 million used in financing activities in the prior year period, an increase of $50.0 million. For the nine months ended September 30, 2022, the Company used $6.6 million to repurchase common stock, $1.2 million in non-controlling interest distributions, and received $0.2 million from proceeds from purchases under the employee stock purchase plan and the exercise of stock options. Additionally, for the nine months ended September 30, 2022, the Company used $37.7 million for net borrowings on the Company's revolving credit lines, primarily used to finance current year acquisitions, and $2.3 million in repayment on long-term debt. In the prior year period, the Company used $4.8 million for repayments on the Company's revolving credit line, and $2.2 million in repayments on long-term debt.

Critical Accounting Policies and Estimates

Management's discussion and analysis of the Company's financial condition and results of operations are based upon the Company's condensed consolidated financial statements. The preparation of these financial statements requires management to make estimates and assumptions about future events. These estimates and the underlying assumptions affect the amounts of assets and liabilities reported, disclosures about contingent assets and liabilities and reported amounts of revenues and expenses. Such estimates include revenue recognition, the valuation of trade receivables, inventories, goodwill, intangible assets, other long-lived assets, legal contingencies, guarantee obligations and assumptions used in the calculation of income taxes, assumptions used in business combination accounting and related balances, and pension and post-retirement benefits, among others. These estimates and assumptions are based on management's best estimates and judgment. Management evaluates its estimates and assumptions on an ongoing basis using historical experience and other factors. Management monitors economic conditions and other factors and will adjust such estimates and assumptions when facts and circumstances dictate. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates.

Management believes there have been no changes during the nine months ended September 30, 2022 to the items that the Company disclosed as its critical accounting policies and estimates in Management's Discussion and Analysis of Financial Condition and Results of Operations in the Company's Annual Report on Form 10-K for the year ended December 31, 2021.

Forward-Looking Statements

This Quarterly Report on Form 10-Q includes 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, both as amended, which are intended to be covered by the safe harbor for "forward-looking statements" provided by the Private Securities Litigation Reform Act of 1995. Any statements contained in this Quarterly Report on Form 10-Q, other than statements of historical fact, including statements about management's beliefs and expectations, are forward-looking statements and should be evaluated as such. These statements are made on the basis of management's views and assumptions regarding future events and business performance. We use words such as "believe," "expect," "anticipate," "intends," "estimate," "forecast," "project," "will," "plan," "should" and similar expressions to identify forward-looking statements. Forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from any future results, performance or achievements expressed or implied by such statements. Potential risks and uncertainties, among others, that could cause actual results to differ materially are discussed under "Part I – Item 1A. Risk Factors" of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, and include, but are not limited to:

- the sensitivity of our business to economic, political and financial market conditions generally and economic conditions in our service areas;
- dependence on fixed price contracts and the risks associated therewith, including actual costs exceeding estimates and method of accounting for revenue;
- the effect of growth on our infrastructure, resources, and existing sales;
- the ability to expand operations in both new and existing markets;
- the potential for contract delay or cancellation as a result of on-going or worsening supply chain challenges;
- the impact of employee-related cost inflation and labor shortages;
- liabilities arising from faulty services or products that could result in significant professional or product liability, warranty, or other claims;
- changes in or developments with respect to any litigation or investigation;
- failure to meet timely completion or performance standards that could result in higher cost and reduced profits or, in some cases, losses on projects;
- the potential for fluctuations in prices for manufactured components and raw materials, including as a result of tariffs and surcharges and rising energy costs;
- inflationary pressures relating to rising raw material costs and the cost of labor;
- the substantial amount of debt incurred in connection with our strategic transactions and our ability to repay or refinance it or incur additional debt in the future;
- the impact of federal, state or local government regulations;
- our ability to repurchase shares of our common stock and the amounts and timing of repurchases, if any;
- our ability to successfully realize the expected benefits of our restructuring program;
- our ability to identify appropriate targets for acquisition to support our growth strategy and to consummate any such acquisitions on acceptable terms;

- our ability to successfully integrate acquired businesses and realize the synergies from strategic transactions, as well as the potential for unknown or inestimable liabilities relating to the acquired businesses; and
- the unpredictability and severity of catastrophic events, including cyber security threats, acts of terrorism or outbreak of war or hostilities or public health crises, such as uncertainties regarding the extent and duration of impacts of matters associated with COVID-19, as well as management's response to any of the aforementioned factors.

Many of these risks are beyond management's ability to control or predict. Should one or more of these risks or uncertainties materialize, or should the assumptions prove incorrect, actual results may vary in material aspects from those currently anticipated. Investors are cautioned not to place undue reliance on such forward-looking statements as they speak only to our views as of the date the statement is made. Furthermore, forward-looking statements speak only as of the date they are made. Except as required under the federal securities laws or the rules and regulations of the Securities and Exchange Commission, we undertake no obligation to update or review any forward-looking statements, whether as a result of new information, future events or otherwise.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to certain market risks, primarily changes in interest rates. Market risk is the potential loss arising from adverse changes in market rates and prices, such as foreign currency exchange and interest rates. For the Company, these exposures are primarily related to changes in interest rates. We do not currently hold any derivatives or other financial instruments purely for trading or speculative purposes.

The carrying value of the Company's total long-term debt and current maturities of long-term debt at September 30, 2022 was $111.9 million. Market risk was estimated as the potential decrease (increase) in future earnings and cash flows resulting from a hypothetical 10% increase (decrease) in the Company's estimated weighted average borrowing rate at September 30, 2022. Most of the interest on the Company's debt is indexed to SOFR market rates. The estimated annual impact of a hypothetical 10% change in the estimated weighted average borrowing rate at September 30, 2022 is $0.6 million.

The Company has wholly-owned subsidiaries in several countries, including in the Netherlands, Canada, the People's Republic of China, Mexico, United Kingdom, Singapore, Shanghai, Pune India, Dubai and Chile. In the past, we have not hedged our foreign currency exposure, and fluctuations in exchange rates have not materially affected our operating results. Future changes in exchange rates may positively or negatively impact our revenues, operating expenses and earnings. Since most of our foreign sales are denominated in the local currency, we do not anticipate that exposure to foreign currency rate fluctuations will be material in 2022.

ITEM 4. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934 (the "Exchange Act")) that are designed to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

The Company's management, with the participation of the Company's Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this Quarterly Report on Form 10-Q. Based on that evaluation, our management, including our Chief Executive Officer and Chief Financial Officer, concluded that our disclosure controls and procedures were effective as of September 30, 2022. Management believes that the condensed consolidated financial statements included in this report fairly present in all material respects the Company's financial condition, results of operations and cash flows for each of the periods presented in this report.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) during the three months ended September 30, 2022 that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Limitations on the Effectiveness of Controls

Control systems, no matter how well conceived and operated, are designed to provide a reasonable, but not an absolute, level of assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected. The Company conducts periodic evaluations of its internal controls to enhance, where necessary, its procedures and controls.

PART II – OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

See Note 13 to the unaudited Condensed Consolidated Financial Statements contained in Part I, Item 1 of this Quarterly Report on Form 10-Q for information regarding legal proceedings in which we are involved.

ITEM 1A. RISK FACTORS

There have been no material changes in the Company's risk factors that we disclosed in "Part I – Item 1A. Risk Factors" of our Annual Report on Form 10-K for the year ended December 31, 2021.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides information about our purchases of our equity securities for the three months ended September 30, 2022:

(in thousands, except share data)	**Issuer's Purchases of Equity Securities**			
Period	**Total Number of Shares Purchased**	**Average Price Paid per Share**	**Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs**	**Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs**
July 1, 2022 - July 31, 2022	79,900	$ 6.60	79,900	$ 15,146
August 1, 2022 - August 31, 2022	92,000	9.44	92,000	14,277
September 1, 2022 - September 30, 2022	84,000	9.43	84,000	13,485
Total	255,900	$ 8.55	255,900	

(1) On May 10, 2022, the Board of Directors authorized a $20.0 million share repurchase program as described within Note 8. The program expires on April 30, 2025.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

10.1^	Separation Agreement, dated as of September 30, 2022, by and between CECO Environmental Corp. and Matthew Eckl
31.1	Rule 13(a)/15d-14(a) Certification by Chief Executive Officer
31.2	Rule 13(a)/15d-14(a) Certification by Chief Financial Officer
32.1	Certification of Chief Executive Officer (18 U.S. Section 1350)
32.2	Certification of Chief Financial Officer (18 U.S. Section 1350)
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

^ Management contracts or compensation plans or arrangement

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.

CECO Environmental Corp.

By: /s/ Paul M. Gohr

Paul M. Gohr
Chief Accounting Officer
(principal accounting officer and duly authorized officer)

Date: November 7, 2022

Exhibit 10.1

EXECUTIVE SEPARATION AGREEMENT AND RELEASE

THIS EXECUTIVE SEPARATION AGREEMENT AND RELEASE (the “Agreement”) is by and between CECO Environmental Corp. (the “Company”) and Matthew Eckl (the “Executive”) as of the Effective Date (as defined below).

WHEREAS, the Company has decided to terminate the Executive’s employment as the Company’s Chief Financial Officer, and the Company and the Executive have mutually agreed to the following satisfactory transitional arrangements.

NOW, THEREFORE, in consideration of this mutual Agreement, the Company and the Executive hereby agree as follows:

1. Departure. Executive’s duties as Chief Financial Officer shall conclude on August 20, 2022 (the “Departure Date”) and Executive’s employment with the Company shall cease on the Departure Date. The Company shall be deemed to have satisfied the notice requirements for a termination of the Executive’s employment to be effective as of the Departure Date under the Executive Employment Agreement, dated as of January 9, 2017, by and between the Company and the Executive (the “Employment Agreement”), a copy of which is attached hereto.

2. Departure Payments. The Company will provide the Executive with the following compensation, provided, in the case of paragraphs (b)-(d), that the Executive has timely executed and not revoked the Release (as set forth in Section 6 of this Agreement) and provided further that the Executive does not violate Section 5 of this Agreement; such compensation shall be in full satisfaction of Section 4 of the Employment Agreement:

(a) The Company has paid or will pay the Executive, in one or more cash payments within 50 calendar days after the Departure Date (specifically, no later than October 9, 2022), the aggregate of the following amounts: the sum of (i) Executive’s annual base salary earned through the Departure Date to the extent not theretofore paid; (ii) Executive’s business expenses that are reimbursable pursuant to Section 2(b)(viii) of the Employment Agreement but have not been reimbursed by the Company as of the Departure Date; and (iii) any accrued vacation pay to the extent not theretofore paid.

(b) On the 61st calendar day after the Departure Date (specifically, October 20, 2022), the Company will pay the Executive Three Hundred Sixty-Six Thousand Dollars ($366,000) in a lump sum in cash, which amount represents the Executive’s annual base salary.

(c) The Company shall pay to the Executive a lump sum cash amount equal to the product of $201,300 (Executive’s 2022 target annual bonus) multiplied by 1.25 (specifically, $251,625), payable at the time 2022 annual bonus payments are made to the Company’s then-current employees, in lieu of any other payment to which Executive may be entitled under the Company’s 2022 annual bonus program.

(d) On the 61st calendar day after the Departure Date (specifically, October 20, 2022), the Company will pay the Executive the amount in a lump sum in cash that represents the product of (i) 12 multiplied by (ii) the monthly COBRA premium for health, dental and vision benefits in effect for the Executive (and Executive’s spouse and dependents) immediately prior to the Departure Date, with such payment to be treated as taxable to the Executive.

(e) In lieu of and notwithstanding the default treatment set forth in the award agreements applicable to the service-based restricted stock unit awards granted to the Executive in 2018, 2019, 2020 and 2021 that remained unvested and outstanding as of the Departure Date (the “RSUs”), as set forth on Exhibit A, such RSUs shall accelerate and be deemed vested as of the Departure Date, and shall be settled in shares not later than March 15, 2023; provided, that such accelerated vesting and settlement is contingent on the Executive timely executing and not revoking the Release (as set forth in Section 6 of this Agreement) and the Executive not violating Section 5 of this Agreement.

3. Obligations of Executive at Departure. Executive hereby resigns as an officer or director of any subsidiaries of the Company effective as of the Departure Date and represents and warrants that Executive will, on or before the

Departure Date, provide any resignations from such other positions as the Company deems necessary. Executive further represents and warrants that Executive will, on or before such date, deliver to the Company the original and all copies of all documents, records, and property of any nature whatsoever which are in Executive's possession or control and which are the property of the Company or which relate to Confidential Information (as defined in Section 8 of the Employment Agreement), or to the business activities, facilities, employees, vendors, suppliers or customers of the Company, including any records (electronic or otherwise), documents or property created by the Executive.

4. Other Agreements. Except as provided below, all the terms of the agreement between the Company and the Executive are embodied in this Agreement and it fully supersedes any and all prior agreements or understandings, written or oral, including any notice periods contained therein, between the Executive and the Company, including, but not limited to, the Employment Agreement:

(a) This Agreement does not affect the restrictive covenants set forth in Section 8 of the Employment Agreement, which shall remain in effect as binding obligations in accordance with their terms.

(b) This Agreement does not limit or restrict in any way Executive's existing rights or obligations under the Company's employee benefit plans, including any retirement plan, retirement savings plan, or group medical plan.

5. Restrictive Covenants. The Executive acknowledges and agrees to comply with the restrictive covenants set forth in Section 8 of the Employment Agreement. Notwithstanding anything in this Agreement to the contrary (or otherwise), nothing in this Agreement (or otherwise) prevents Executive from providing, without prior notice to the Company, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for the purpose of clarity Executive is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Securities Exchange Act of 1934, as amended.

6. Release.

(a) In consideration of the promises and covenants made herein, the Executive, for the Executive, the Executive's heirs, executors, administrators, successors and assigns, does hereby RELEASE, ACQUIT AND FOREVER DISCHARGE the Company, and each of its parent, subsidiary, related and affiliated corporations or other entities, and each of their respective present or former officers, directors, shareholders, employees, agents, representatives, successors and assigns (all of whom are hereinafter collectively referred to as "Releasees") from any and all claims, demands, causes of action and liabilities of any kind or character, accrued or to accrue hereafter, which the Executive ever had, now has or may hereafter have against Releasees, through the Departure Date, arising out of any act, omission, statement, representation, transaction or occurrence, including, without limitation, those related to the Executive's employment by the Company or the termination thereof. Without limiting the generality of the foregoing, it is understood and agreed that this Release constitutes a release of any claim or cause of action: (i) for breach of any employment, commission or other agreement existing between the Executive and the Company, all of which are hereby acknowledged to have terminated, except as otherwise stated herein; or (ii) otherwise related, in any way, to the Executive's employment by the Company, including the termination thereof, and includes, without limitation, claims under Title VII of the Civil Rights Act of 1964 (and all of its amendments); the Americans with Disabilities Act of 1990, as amended; the Age Discrimination in Employment Act; the Older Workers Benefit Protection Act; the Anti-Retaliation provision of the Texas Workers Compensation Act; the Fair Labor Standards Act; the Texas Pay Day Law; the Texas Labor Code; the Family and Medical Leave Act; the Occupational Safety and Health Act; the National Labor Relations Act; the Fair Credit Reporting Act, as amended; the Rehabilitation Act; the Consolidated Omnibus Budget Reconciliation Act of 1985 (COBRA); the Sarbanes-Oxley Act of 2002; the Employee Polygraph Protection Act; the Financial Institutions Reform, Recovery and Enforcement Act; the Uniform Services Employment and Reemployment Rights Act of 1994; and any other state or federal statute or regulation governing the employment relationship or the Executive's rights, or the Company's obligations, in connection therewith. This release also constitutes a release of any claim or cause of action for invasion of privacy, intentional or negligent infliction of emotional distress, wrongful termination, promissory estoppel, false imprisonment, defamation, negligence, gross negligence, breach of contract, libel or slander, tortious interference with contract or business relationship, misrepresentation, deceptive trade practices, fraud, and any employment-related claims, or for any personal injuries, however characterized, or by virtue of any fact(s), act(s) or event(s) occurring prior to the date of this Agreement.

(b) **THE EXECUTIVE UNDERSTANDS THAT BY SIGNING AND NOT REVOKING THIS RELEASE, THE EXECUTIVE IS WAIVING ANY AND ALL RIGHTS OR CLAIMS WHICH THE EXECUTIVE MAY HAVE UNDER THE AGE DISCRIMINATION IN EMPLOYMENT ACT AND/OR THE OLDER WORKERS BENEFIT PROTECTION ACT ("OWBPA") FOR AGE DISCRIMINATION ARISING FROM EMPLOYMENT WITH THE COMPANY, INCLUDING, WITHOUT LIMITATION, THE RIGHT TO SUE THE COMPANY IN FEDERAL OR STATE COURT FOR AGE DISCRIMINATION. THE EXECUTIVE FURTHER ACKNOWLEDGES THAT THE EXECUTIVE: (1) DOES NOT WAIVE ANY CLAIMS OR RIGHTS THAT MAY ARISE AFTER THE DATE THE AGREEMENT IS EXECUTED; (2) WAIVES CLAIMS OR RIGHTS ONLY IN EXCHANGE FOR CONSIDERATION IN ADDITION TO ANYTHING OF VALUE TO WHICH THE EXECUTIVE IS ALREADY ENTITLED; (3) HAS BEEN ADVISED BY THE COMPANY IN WRITING OF THE EXECUTIVE'S RIGHT TO CONSULT WITH AN ATTORNEY BEFORE SIGNING THIS RELEASE; (4) AGREES THAT THIS AGREEMENT IS WRITTEN IN A MANNER CALCULATED TO BE UNDERSTOOD BY THE EXECUTIVE, AND THE EXECUTIVE, IN FACT, UNDERSTANDS THE TERMS, CONTENTS, CONDITIONS, AND EFFECTS OF THIS AGREEMENT, AND HAS ENTERED INTO THIS AGREEMENT KNOWINGLY AND VOLUNTARILY; AND (5) HAS RECEIVED THE DISCLOSURES REQUIRED BY THE OWBPA, WHICH ARE ATTACHED TO THIS AGREEMENT AS EXHIBIT B.**

(c) Anything herein to the contrary notwithstanding, this Agreement does not constitute a release nor a waiver of the Executive's right to file a charge or participate in an investigation or proceeding conducted by the Equal Employment Opportunity Commission, the Texas Workforce Commission, or any other governmental agency with jurisdiction to regulate employment conditions or regulations; provided further, that the Executive does release and relinquish any right to receive any money, property, or any other thing of value, or any other financial benefit or award, as a result of any proceeding of any kind or character initiated by any such governmental agencies or organizations.

(d) The Executive acknowledges that the payments contemplated by Section 2 include consideration which the Executive would not be entitled to receive but for the Executive's execution and non-revocation of this Agreement.

7. Power of Attorney. The Company hereby revokes any and all powers of attorney the Company may have granted the Executive during the Executive's employment with the Company.

8. Expenses and Insurance. With respect to services provided by the Executive to the Departure Date and pursuant to this Agreement, the Company shall (a) reimburse Executive for reasonable business expenses incurred in the performance of Executive's services, (b) maintain Director and Officer insurance coverage for the Executive consistent with that provided to other Company directors and officers, and (c) provide Executive with full indemnification as permitted by law.

9. Taxes. All payments made herein or the value of all property transferred to Executive hereunder shall be subject to applicable payroll and withholding taxes. This Agreement shall be construed and administered in compliance with Section 409A of the Internal Revenue Code. The parties agree to amend the Agreement as may be necessary to avoid application of Code Section 409A excise taxes or penalties to payments made pursuant to this Agreement.

10. Severability. In the event any one or more of the provisions of this Agreement (or any part thereof) shall for any reason be held to be invalid, illegal or unenforceable, the remaining provisions of this Agreement (or part thereof) shall be unimpaired, and the invalid, illegal or unenforceable provision (or part thereof) shall be replaced by a provision (or part thereof), which, being valid, legal and enforceable, comes closest to the intention of the parties underlying the invalid, illegal or unenforceable provisions. However, in the event that any such provision of this Agreement (or part thereof) is adjudged by a court of competent jurisdiction to be invalid, illegal or unenforceable, but that the other provisions (or part thereof) are adjudged to be valid, legal and enforceable if such invalid, illegal or unenforceable provision (or part thereof) were deleted or modified, then this Agreement shall apply with only such deletions or modifications, or both, as the case may be, as are necessary to permit the remaining separate provisions (or part thereof) to be valid, legal and enforceable.

11. Governing Law. This Agreement shall be governed by the substantive laws of the State of Texas without regard to its conflict of laws provisions or the laws of any other jurisdiction in which the Executive resides or performs any duties hereunder, or where any violation of the Agreement occurs.

12. Successors; Binding Agreement; Notices. The Company shall have the right to assign its obligations under this Agreement to any entity that acquires all or substantially all of the assets of the Company and continues the Company’s business. The rights and obligations of the Company under this Agreement shall inure to the benefit of and shall be binding upon the Company and its successors and assigns. The Executive may not assign the Executive’s rights or delegate the Executive’s obligations hereunder. Except as otherwise set forth under Section 15, all notices and other communications hereunder or under the Employment Agreement shall be in writing and shall be given by hand delivery to the other party or by registered or certified mail, return receipt requested, postage prepaid, addressed as follows: If to the Executive, at the most recent address on file at the Company. If to the Company, to CECO Environmental Corp.; 14651 North Dallas Parkway, Suite 500; Dallas, Texas, 75254.

13. Amendment; Waiver. This Agreement may be amended or modified only by a written instrument executed by the Company and the Executive. No provision of this Agreement may be waived or discharged unless such waiver or discharge is in writing and signed by the Chief Executive Officer of the Company. Any failure by Executive or the Company to enforce any of the provisions of this Agreement shall not be construed to be a waiver of such provisions or any right to enforce each and every provision in the future. A waiver of any breach of this Agreement shall not be construed as a waiver of any other or subsequent breach.

14. Time Period for Enforceability/Revocation of Agreement. The Company's obligation to pay the amounts set forth in Section 2 and provide any other benefits described in this Agreement is contingent upon the Executive executing and returning this Agreement to the Company. The Executive may take up to forty-five (45) days after receiving this Agreement, to consider this Agreement prior to executing it. The Executive may sign this Agreement at any time during this forty-five (45) day period, except that the Executive may not sign this Agreement prior to the Departure Date. Any changes made to this Agreement after presentation to the Executive will not restart the running of the forty-five (45) day period. After executing this Agreement, the Executive shall have seven (7) days during which time the Executive may revoke the Executive’s consent to this Agreement by given written or electronic notification of the decision to revoke to the Company. This Agreement will not become effective or enforceable, and the payments and benefits described herein shall not become due, until such revocation period has expired and the Executive has delivered a written or electronic notice that the Executive has not exercised the Executive’s right to revoke this Agreement which notice is dated not less than eight (8) days after the date on which this Agreement is executed in substantially the form attached hereto as Exhibit C.

15. Notice of Revocation. Any notice of revocation to be given pursuant to the foregoing paragraph shall be sent by email or facsimile transmission to: Lynn Watkins-Asiyanbi, Senior Vice President, General Counsel and Corporate Secretary at lwatkins@OneCECO.com or (214) 351-4172. The Executive understands and acknowledges that the Executive will not receive any monies or benefits pursuant to this Agreement except upon the execution and non-revocation of this Agreement, and the fulfillment of the promises contained herein.

16. Effective Date. The Effective Date of this Agreement shall be the date on which it is signed by the Executive, provided that it is also signed by the Company, regardless of when it is signed by the Company and provided that the Executive does not revoke this Agreement in accordance with the provisions hereof.

THE COMPANY AND THE EXECUTIVE ACKNOWLEDGE THAT (A) EACH HAS CAREFULLY READ THIS AGREEMENT, (B) EACH UNDERSTANDS ITS TERMS, (C) ALL UNDERSTANDINGS AND AGREEMENTS BETWEEN THE COMPANY AND THE EXECUTIVE RELATING TO THE SUBJECTS COVERED IN THE AGREEMENT ARE CONTAINED IN IT, AND (D) EACH HAS ENTERED INTO THIS AGREEMENT VOLUNTARILY AND NOT IN RELIANCE ON ANY PROMISES OR REPRESENTATIONS BY THE OTHER, OTHER THAN THOSE CONTAINED IN THIS AGREEMENT ITSELF.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement.

Matthew Eckl	**CECO Environmental Corp.**
/s/ Matthew Eckl Signature of Executive	/s/ Todd Gleason Todd Gleason Chief Executive Officer
September 30, 2022 Date	September 9, 2022 Date

OMITTED SCHEDULES

EXHIBIT A: Accelerated RSUs
EXHIBIT B: Program Information
EXHIBIT C: Notice of Non-Revocation

Exhibit 31.1

Certification of Chief Executive Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Todd Gleason, certify that:

1. I have reviewed this quarterly report on Form 10-Q of CECO Environmental Corp.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Todd Gleason
Todd Gleason
Chief Executive Officer

Date: November 7, 2022

Exhibit 31.2

Certification of Chief Financial Officer
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Peter Johansson, certify that:

1. I have reviewed this quarterly report on Form 10-Q of CECO Environmental Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

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

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

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

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

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

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

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

/s/ Peter Johansson
Peter Johansson
Chief Financial and Strategy Officer

Date: November 7, 2022

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of CECO Environmental Corp. (the “Company”) on Form 10-Q for the nine month period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Todd Gleason, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

/s/ Todd Gleason
Todd Gleason
Chief Executive Officer

Date: November 7, 2022

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of CECO Environmental Corp. (the “Company”) on Form 10-Q for the nine month period ended September 30, 2022 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Peter Johansson, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, to the best of my knowledge and belief, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

/s/ Peter Johansson
Peter Johansson
Chief Financial and Strategy Officer

Date: November 7, 2022