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 March 31, 2023

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 Number: 001-38221

Ecovyst Inc.

Delaware	**81-3406833**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
300 Lindenwood Drive Malvern, Pennsylvania	**19355**
(Address of principal executive offices)	(Zip Code)

(484) 617-1200
(Registrant's telephone number, including area code)

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	ECVT	New York Stock Exchange

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 of common stock outstanding as of May 2, 2023 was 120,161,142.

Ecovyst Inc.

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March 31, 2023

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PART I—FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (UNAUDITED)

ECOVYST INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in thousands, except share and per share amounts)
(unaudited)

	Three months ended March 31,	
	2023	2022
Sales	$ 160,874	$ 179,714
Cost of goods sold	124,381	131,979
Gross profit	36,493	47,735
Selling, general and administrative expenses	21,119	23,536
Other operating expense, net	6,716	7,763
Operating income	8,658	16,436
Equity in net (income) from affiliated companies	(223)	(5,749)
Interest expense, net	9,832	8,450
Other (income) expense, net	(427)	140
(Loss) income before income taxes	(524)	13,595
Provision for income taxes	947	5,720
Net (loss) income attributable to Ecovyst Inc.	$ (1,471)	$ 7,875
Net (loss) income per share:		
Basic (loss) income per share	$ (0.01)	$ 0.06
Diluted (loss) income per share	$ (0.01)	$ 0.06
Weighted average shares outstanding:		
Basic	122,178,867	137,684,773
Diluted	122,178,867	138,749,065

See accompanying notes to condensed consolidated financial statements.

ECOVYST INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(in thousands)
(unaudited)

	Three months ended March 31,	
	2023	**2022**
Net (loss) income attributable to Ecovyst Inc.	$ (1,471)	$ 7,875
Other comprehensive income (loss), net of tax:		
Pension and postretirement benefits	(24)	(39)
Net (loss) gain from hedging activities	(7,920)	13,722
Foreign currency translation	2,185	(2,305)
Total other comprehensive (loss) income	(5,759)	11,378
Comprehensive (loss) income attributable to Ecovyst Inc.	$ (7,230)	$ 19,253

See accompanying notes to condensed consolidated financial statements.

ECOVYST INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in thousands, except share and per share amounts)
(unaudited)

	March 31, 2023	December 31, 2022
ASSETS		
Cash and cash equivalents	$ 61,619	$ 110,920
Accounts receivable, net	66,609	74,758
Inventories, net	45,828	44,362
Derivative assets	15,996	18,510
Prepaid and other current assets	31,301	19,154
Total current assets	221,353	267,704
Investments in affiliated companies	437,172	436,013
Property, plant and equipment, net	583,703	584,889
Goodwill	403,762	403,163
Other intangible assets, net	126,739	129,932
Right-of-use lease assets	27,575	28,265
Other long-term assets	29,745	34,587
Total assets	$ 1,830,049	$ 1,884,553
LIABILITIES		
Current maturities of long-term debt	$ 9,000	$ 9,000
Accounts payable	34,130	40,019
Operating lease liabilities—current	8,070	8,155
Accrued liabilities	57,770	72,229
Total current liabilities	108,970	129,403
Long-term debt, excluding current portion	864,128	865,870
Deferred income taxes	136,591	136,184
Operating lease liabilities—noncurrent	19,440	20,021
Other long-term liabilities	26,769	25,846
Total liabilities	1,155,898	1,177,324
Commitments and contingencies (Note 15)		
EQUITY		
Common stock ($0.01 par); authorized shares 450,000,000; issued shares 140,604,563 and 139,571,272 on March 31, 2023 and December 31, 2022, respectively; outstanding shares 120,124,260 and 122,186,238 on March 31, 2023 and December 31, 2022, respectively	1,406	1,396
Preferred stock ($0.01 par); authorized shares 50,000,000; no shares issued or outstanding on March 31, 2023 and December 31, 2022	—	—
Additional paid-in capital	1,096,333	1,091,475
Accumulated deficit	(243,481)	(242,010)
Treasury stock, at cost; shares 20,480,303 and 17,385,034 on March 31, 2023 and December 31, 2022, respectively	(180,340)	(149,624)
Accumulated other comprehensive income	233	5,992
Total equity	674,151	707,229
Total liabilities and equity	$ 1,830,049	$ 1,884,553

See accompanying notes to condensed consolidated financial statements.

ECOVYST INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(in thousands)
(unaudited)

	Common stock	Additional paid-in capital	(Accumulated deficit)	Treasury stock, at cost	Accumulated other comprehensive income	Total
Balance, December 31, 2022	$ 1,396	$ 1,091,475	$ (242,010)	$ (149,624)	$ 5,992	$ 707,229
Net loss	—	—	(1,471)	—	—	(1,471)
Other comprehensive loss	—	—	—	—	(5,759)	(5,759)
Repurchases of common shares	—	—	—	(29,850)	—	(29,850)
Tax withholdings on equity award vesting	—	—	—	(866)	—	(866)
Stock compensation expense	—	4,756	—	—	—	4,756
Shares issued under equity incentive plan, net of forfeitures	10	102	—	—	—	112
Balance, March 31, 2023	$ 1,406	$ 1,096,333	$ (243,481)	$ (180,340)	$ 233	$ 674,151

	Common stock	Additional paid-in capital	(Accumulated deficit)	Treasury stock, at cost	Accumulated other comprehensive income (loss)	Total
Balance, December 31, 2021	$ 1,378	$ 1,073,409	$ (315,707)	$ (12,551)	$ (5,792)	$ 740,737
Net income	—	—	7,875	—	—	7,875
Other comprehensive income	—	—	—	—	11,378	11,378
Tax withholdings on equity award vesting	—	—	—	(332)	—	(332)
Stock compensation expense	—	5,946	—	—	—	5,946
Shares issued under equity incentive plan, net of forfeitures	18	9	—	—	—	27
Balance, March 31, 2022	$ 1,396	$ 1,079,364	$ (307,832)	$ (12,883)	$ 5,586	$ 765,631

See accompanying notes to condensed consolidated financial statements.

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ECOVYST INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Three months ended March 31, 2023	Three months ended March 31, 2022
Cash flows from operating activities:		
Net (loss) income attributable to Ecovyst Inc.	$ (1,471)	$ 7,875
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation	16,692	16,011
Amortization	3,505	3,535
Amortization of deferred financing costs and original issue discount	508	497
Foreign currency exchange (gain) loss	(437)	647
Pension and postretirement healthcare benefit	8	(553)
Deferred income tax provision	2,790	9,341
Net loss on asset disposals	1,178	133
Stock compensation	4,068	7,294
Equity in net income from affiliated companies	(223)	(5,749)
Dividends received from affiliated companies	—	15,000
Other, net	(3,783)	(6,841)
Working capital changes that provided (used) cash:		
Receivables	8,364	(10,386)
Inventories	(1,323)	(1,034)
Prepaids and other current assets	(9,732)	(3,590)
Accounts payable	(1,946)	2,154
Accrued liabilities	(14,084)	(27,911)
Net cash provided by operating activities	4,114	6,423
Cash flows from investing activities:		
Purchases of property, plant and equipment	(18,698)	(10,750)
Payments for business divestiture, net of cash	—	(3,744)
Other, net	—	81
Net cash used in investing activities	(18,698)	(14,413)
Cash flows from financing activities:		
Repayments of long-term debt	(2,250)	(2,250)
Repurchases of common shares	(29,850)	—
Tax withholdings on equity award vesting	(866)	(332)
Repayment of financing obligation	(701)	—
Other, net	97	27
Net cash used in financing activities	(33,570)	(2,555)
Effect of exchange rate changes on cash and cash equivalents	(1,147)	(596)
Net change in cash and cash equivalents	(49,301)	(11,141)
Cash and cash equivalents at beginning of period	110,920	140,889
Cash and cash equivalents at end of period	$ 61,619	$ 129,748

For supplemental cash flow disclosures, see Note 19.

See accompanying notes to condensed consolidated financial statements.

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
(unaudited)

1. Background and Basis of Presentation:

Description of Business

Ecovyst Inc. and subsidiaries (the “Company” or “Ecovyst”) is a leading integrated and innovative global provider of specialty catalysts and services. The Company supports customers globally through its strategically located network of manufacturing facilities. The Company believes that its products, which are predominantly inorganic, and services contribute to improving the sustainability of the environment.

The Company has two uniquely positioned specialty businesses: Ecoservices provides sulfuric acid recycling to the North American refining industry for the production of alkylate and provides on-purpose virgin sulfuric acid for water treatment, mining and industrial applications; and Catalyst Technologies provides finished silica catalysts and catalyst supports necessary to produce high strength and high stiffness plastics and, through the Zeolyst Joint Venture, supplies zeolites used for catalysts that help produce renewable fuels, remove nitrogen oxides from diesel engine emissions as well as sulfur from fuels during the refining process.

The Company’s regeneration services product group, which is a part of the Company’s Ecoservices segment, typically experiences seasonal fluctuations as a result of higher demand for gasoline products in the summer months and lower demand in the winter months. These demand fluctuations result in higher sales and working capital requirements in the second and third quarters.

Basis of Presentation

The condensed consolidated financial statements included herein are unaudited. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States (“GAAP”) have been condensed or omitted pursuant to such rules and regulations for interim reporting. In the opinion of management, all adjustments of a normal and recurring nature necessary to state fairly the financial position and results of operations have been included. The results of operations are not necessarily indicative of the expected results for the full year. The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and related notes included in the Company’s Annual Report on Form 10-K for the year ended December 31, 2022.

2. New Accounting Standards:

Recently Adopted Accounting Standards

In March 2020 and January 2021, the Financial Accounting Standards Board (“FASB”) issued guidance to address certain accounting consequences from the anticipated transition from the use of the London Interbank Offered Rate (“LIBOR”) and other interbank offered rates to alternative reference rates. The new guidance contains practical expedients for reference rate reform related activities that impact debt, leases, derivatives and other contracts. The guidance is optional and may be elected over time as reference rate reform activities occur. The time period through which the practical expedients provided in the guidance is available was set to expire on December 31, 2022, but was extended through December 31, 2024 by the FASB in December 2022. During the year ended December 31, 2020, the Company elected to apply the hedge accounting expedients related to probability and the assessments of effectiveness for future LIBOR-indexed cash flows to assume that the index upon which future hedged transactions will be based matches the index of the corresponding derivatives. Application of these expedients preserves the presentation of derivatives consistent with past presentation. In February 2023, the Company amended the 2021 Term Loan Facility, the ABL Facility and all existing interest rate caps agreements to replace LIBOR with a secured overnight financing rate (“SOFR”) as the benchmark interest rate. See Notes 11 and 12 to these condensed consolidated financial statements for additional information. The Company utilized the practical expedients under the guidance with respect to the transition of its debt facilities and interest rate hedging arrangements to SOFR, with no impact to its condensed consolidated financial statements.

In October 2021, the FASB issued guidance that requires contract assets and contract liabilities acquired in a business combination to be recognized and measured by the acquirer on the acquisition date in accordance with revenue recognition guidance. Under current GAAP, contract assets and contract liabilities acquired in a business combination are recorded by the acquirer at fair value. The new guidance creates an exception to the general recognition and measurement principles related to business combinations, and is expected to result in the acquirer recognizing contract assets and liabilities at the same amounts recorded by the acquiree. The new guidance is effective for business combinations occurring during fiscal years beginning after December 15, 2022, including interim periods within those fiscal years, with early adoption permitted. The Company adopted the new guidance effective January 1, 2023 as required, and will apply the guidance prospectively to business combinations that occur after the adoption date.

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
(unaudited)

3. Revenue from Contracts with Customers:

Disaggregated Revenue

The Company's primary means of disaggregating revenues is by reportable segments, which can be found in Note 16 to these condensed consolidated financial statements.

The Company's portfolio of products is integrated into a variety of end uses, which are described in the table below.

Key End Uses	Key Products
Clean fuels, emission control & other	• Refining hydrocracking catalysts
	• Emission control catalysts
	• Catalysts used in production of renewable fuels
	• Catalyst activation
	• Aluminum sulfate solution
	• Ammonium bisulfite solution
Polymers & engineered plastics	• Catalysts for high-density polyethylene and chemicals syntheses
	• Antiblocks for film packaging
	• Niche custom catalyst
Regeneration and treatment services	• Sulfuric acid regeneration services
	• Treatment services
Industrial, mining & automotive	• Sulfur derivatives for industrial production
	• Sulfuric acid for mining
	• Sulfuric derivatives for nylon production

The following tables disaggregate the Company's sales, by segment and end uses, for the three months ended March 31, 2023 and 2022, respectively:

	Three months ended March 31, 2023		
	Ecoservices	Catalyst Technologies[(2)]	Total
Clean fuels, emission control & other	$ 4,740	$ —	$ 4,740
Polymers & engineered plastics	—	23,134	23,134
Regeneration and treatment services[(1)]	88,344	—	88,344
Industrial, mining & automotive	44,656	—	44,656
Total segment sales	$ 137,740	$ 23,134	$ 160,874

	Three months ended March 31, 2022		
	Ecoservices	Catalyst Technologies[(2)]	Total
Clean fuels, emission control & other	$ 7,096	$ —	$ 7,096
Polymers & engineered plastics	—	25,654	25,654
Regeneration and treatment services[(1)]	73,973	—	73,973
Industrial, mining & automotive	72,991	—	72,991
Total segment sales	$ 154,060	$ 25,654	$ 179,714

(1) As described in Note 1 to these condensed consolidated financial statements, the Company experiences seasonal sales fluctuations to customers in the regeneration services product group.

(2) Excludes the Company's proportionate share of sales from the Zeolyst International and Zeolyst C.V. joint ventures (collectively, the "Zeolyst Joint Venture") accounted for using the equity method (see Note 9 to these condensed consolidated financial statements for further information).

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
(unaudited)

4. Fair Value Measurements:

Fair values are based on quoted market prices when available. When market prices are not available, fair values are generally estimated using discounted cash flow analyses, incorporating current market inputs for similar financial instruments with comparable terms and credit quality. In instances where there is little or no market activity for the same or similar instruments, the Company estimates fair values using methods, models and assumptions that management believes a hypothetical market participant would use to determine a current transaction price. These valuation techniques involve some level of management estimation and judgment that becomes significant with increasingly complex instruments or pricing models. Where appropriate, adjustments are included to reflect the risk inherent in a particular methodology, model or input used.

The Company's financial assets and liabilities carried at fair value have been classified based upon a fair value hierarchy. The hierarchy gives the highest ranking to fair values determined using unadjusted quoted prices in active markets for identical assets and liabilities (Level 1) and the lowest ranking to fair values determined using methodologies and models with unobservable inputs (Level 3). The classification of an asset or a liability is based on the lowest level input that is significant to its measurement. For example, a Level 3 fair value measurement may include inputs that are both observable (Levels 1 and 2) and unobservable (Level 3). The levels of the fair value hierarchy are as follows:

- Level 1—Values are unadjusted quoted prices for identical assets and liabilities in active markets accessible at the measurement date. Active markets provide pricing data for trades occurring at least weekly and include exchanges and dealer markets.
- Level 2—Inputs include quoted prices for similar assets or liabilities in active markets, quoted prices from those willing to trade in markets that are not active, or other inputs that are observable or can be corroborated by market data for the term of the instrument. Such inputs include market interest rates and volatilities, spreads and yield curves.
- Level 3—Certain inputs are unobservable (supported by little or no market activity) and significant to the fair value measurement. Unobservable inputs reflect the Company's best estimate of what hypothetical market participants would use to determine a transaction price for the asset or liability at the reporting date.

The following tables present information about the Company's assets and liabilities that were measured at fair value on a recurring basis as of March 31, 2023 and December 31, 2022, and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value.

	March 31, 2023	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Derivative assets:				
Interest rate caps (Note 12)	$ 26,512	$ —	$ 26,512	$ —
Derivative liabilities:				
Interest rate caps (Note 12)	$ 3,815	$ —	$ 3,815	$ —

	December 31, 2022	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Derivative assets:				
Interest rate caps (Note 12)	$ 34,374	$ —	$ 34,374	$ —
Derivative liabilities:				
Interest rate caps (Note 12)	$ 2,071	$ —	$ 2,071	$ —

(Dollars in thousands, except share and per share amounts)

Derivative contracts

Derivative assets and liabilities can be exchange-traded or traded over-the-counter ("OTC"). The Company generally values exchange-traded derivatives using models that calibrate to market transactions and eliminate timing differences between the closing price of the exchange-traded derivatives and their underlying instruments. OTC derivatives are valued using market transactions and other market evidence whenever possible, including market-based inputs to models, model calibration to market transactions, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. When models are used, the selection of a particular model to value an OTC derivative depends on the contractual terms of, and specific risks inherent in, the instrument as well as the availability of pricing information in the market. The Company generally uses similar models to value similar instruments. Valuation models require a variety of inputs, including contractual terms, market prices and rates, forward curves, measures of volatility, and correlations of such inputs. For OTC derivatives that trade in liquid markets, such as forward contracts, swaps and options, model inputs can generally be corroborated by observable market data by correlation or other means, and model selection does not involve significant management judgment.

As of March 31, 2023, the Company had interest rate caps that were fair valued using Level 2 inputs. In addition, the Company applies a credit valuation adjustment to reflect credit risk which is calculated based on credit default swaps. To the extent that the Company's net exposure under a specific master agreement is an asset, the Company utilizes the counterparty's default swap rate. If the net exposure under a specific master agreement is a liability, the Company utilizes a default swap rate comparable to Ecovyst. The credit valuation adjustment is added to the discounted fair value to reflect the exit price that a market participant would be willing to receive to assume the Company's liabilities or that a market participant would be willing to pay for the Company's assets.

5. Stockholders' Equity:

Accumulated Other Comprehensive Income (Loss)

The following table presents the tax effects of each component of other comprehensive (loss) income for the three months ended March 31, 2023 and 2022, respectively:

	Three months ended March 31,					
	2023			2022		
	Pre-tax amount	Tax benefit/ (expense)	After-tax amount	Pre-tax amount	Tax benefit/ (expense)	After-tax amount
Defined benefit and other postretirement plans:						
Amortization of net loss	$ (1)	$ —	$ (1)	$ 1	$ —	$ 1
Amortization of prior service credit	(31)	8	(23)	(53)	13	(40)
Benefit plans, net	(32)	8	(24)	(52)	13	(39)
Net (loss) gain from hedging activities	(10,303)	2,383	(7,920)	18,296	(4,574)	13,722
Foreign currency translation	2,185	—	2,185	(2,305)	—	(2,305)
Other comprehensive (loss) income	$ (8,150)	$ 2,391	$ (5,759)	$ 15,939	$ (4,561)	$ 11,378

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
(unaudited)

The following table presents the changes in accumulated other comprehensive income, net of tax, by component for the three months ended March 31, 2023 and 2022, respectively:

	Defined benefit and other postretirement plans	Net gain (loss) from hedging activities	Foreign currency translation	Total
December 31, 2022	$ 12,132	$ 26,636	$ (32,776)	$ 5,992
Other comprehensive (loss) income before reclassifications	(48)	(7,394)	2,185	(5,257)
Amounts reclassified from accumulated other comprehensive income[1]	24	(526)	—	(502)
Net current period other comprehensive (loss) income	(24)	(7,920)	2,185	(5,759)
March 31, 2023	$ 12,108	$ 18,716	$ (30,591)	$ 233
December 31, 2021	$ 11,072	$ 2,254	$ (19,118)	$ (5,792)
Other comprehensive income (loss) before reclassifications	(78)	13,208	(2,305)	10,825
Amounts reclassified from accumulated other comprehensive income[1]	39	514	—	553
Net current period other comprehensive (loss) income	(39)	13,722	(2,305)	11,378
March 31, 2022	$ 11,033	$ 15,976	$ (21,423)	$ 5,586

(1) See the following table for details about these reclassifications. Amounts in parentheses indicate debits.

The following table presents the reclassifications out of accumulated other comprehensive income for the three months ended March 31, 2023 and 2022, respectively:

Details about Accumulated Other Comprehensive Income Components	Amounts Reclassified from Accumulated Other Comprehensive Income[1]		Affected Line Item where Income is Presented
	Three months ended March 31,		
	2023	2022	
Amortization of defined benefit and other postretirement items:			
Prior service credit	$ (31)	$ (53)	Other expense[2]
Actuarial gains	(1)	1	Other (expense) income[2]
	(32)	(52)	Total before tax
	8	13	Tax benefit
	$ (24)	$ (39)	Net of tax
Gains and losses on cash flow hedges:			
Interest rate caps	$ 698	$ (683)	Interest expense
	(172)	169	Tax (expense) benefit
	$ 526	$ (514)	Net of tax
Total reclassifications for the period	$ 502	$ (553)	Net of tax

(1) Amounts in parentheses indicate debits to profit/loss.

(2) These accumulated other comprehensive income (loss) components are components of net periodic pension and other postretirement cost (see Note 14 to these condensed consolidated financial statements for additional details).

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
(unaudited)

Treasury Stock Repurchases

2022 Stock Repurchase Program

On April 27, 2022, the Board approved a stock repurchase program that permits the Company to purchase up to $450,000 of the Company's common stock over the four-year period from the date of approval. Under the plan, the Company can repurchase shares from time to time for cash in open market transactions or in privately negotiated transactions in accordance with applicable federal securities laws. The Company will determine the timing and the amount of any repurchases based on its evaluation of market conditions, share price and other factors.

During the three months ended March 31, 2023, in connection with a secondary offering of the Company's common stock in March 2023, the Company repurchased 3,000,000 shares of its common stock sold in the offering from the underwriter at a price of $9.95 per share concurrently with the closing of the offering, for a total of $29,850.

As of March 31, 2023, $283,448 was available for additional share repurchases under the program.

Tax Withholdings on Equity Award Vesting

In connection with the vesting of restricted stock awards, restricted stock units and performance stock units, shares of common stock may be delivered to the Company by employees to satisfy withholding tax obligations at the instruction of the employee award holders. These transactions, when they occur, are accounted for as stock repurchases by the Company, with the shares returned to treasury stock at a cost representing the payment by the Company of the tax obligations on behalf of the employees in lieu of shares for the vesting unit. There were 95,269 and 32,058 shares delivered to the Company to cover tax payments for the three months ended March 31, 2023 and 2022, respectively and the fair value of those shares withheld were $866 and $332 for the three months ended March 31, 2023 and 2022, respectively.

6. Goodwill:

The change in the carrying amount of goodwill for the three months ended March 31, 2023 is summarized as follows:

	Ecoservices	Catalyst Technologies	Total
Balance as of December 31, 2022	$ 326,589	$ 76,574	$ 403,163
Foreign exchange impact	—	599	599
Balance as of March 31, 2023	$ 326,589	$ 77,173	$ 403,762

7. Other Operating Expense, Net:

A summary of other operating expense, net is as follows:

	Three months ended March 31,	
	2023	2022
Amortization expense	$ 2,637	$ 2,656
Transaction and other related costs	1,434	4,281
Restructuring, integration and business optimization costs	1,023	382
Net loss on asset disposals	1,178	133
Other, net	444	311
	$ 6,716	$ 7,763

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8. Inventories, Net:

Inventories, net are classified and valued as follows:

	March 31, 2023	December 31, 2022
Finished products and work in process	$ 41,803	$ 39,909
Raw materials	4,025	4,453
	$ 45,828	$ 44,362
Valued at lower of cost or market:		
LIFO basis	$ 25,647	$ 25,258
Valued at lower of cost and net realizable value:		
FIFO or average cost basis	20,181	19,104
	$ 45,828	$ 44,362

9. Investments in Affiliated Companies:

The Company accounts for investments in affiliated companies under the equity method. Affiliated companies accounted for on the equity basis as of March 31, 2023 are as follows:

Company	Country	Percent Ownership
Zeolyst International	USA	50%
Zeolyst C.V.	Netherlands	50%

Following is summarized information of the combined investments[(1)]:

	Three months ended March 31,	
	2023	2022
Sales	$ 55,897	$ 66,683
Gross profit	10,110	23,584
Operating income	2,399	14,636
Net income	3,647	14,698

(1) Summarized information of the combined investments is presented at 100%; the Company's share of the net assets and net income of affiliates is calculated based on the percent ownership specified in the table above.

The Company's investments in affiliated companies balance as of March 31, 2023 and December 31, 2022 includes net purchase accounting fair value adjustments of $229,416 and $231,017, respectively, related to a prior business combination, consisting primarily of goodwill and intangible assets such as customer relationships, technical know-how and trade names. Consolidated equity in net income from affiliates is net of $1,601 and $1,601 of amortization expense related to purchase accounting fair value adjustments for the three months ended March 31, 2023 and 2022, respectively.

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10. Property, Plant and Equipment:

A summary of property, plant and equipment, at cost, and related accumulated depreciation is as follows:

	March 31, 2023	December 31, 2022
Land	$ 96,739	$ 96,659
Buildings and improvements	81,473	82,061
Machinery and equipment	754,529	751,145
Construction in progress	69,134	56,448
	1,001,875	986,313
Less: accumulated depreciation	(418,172)	(401,424)
	$ 583,703	$ 584,889

Depreciation expense was $16,692 and $16,011 for the three months ended March 31, 2023 and 2022, respectively.

11. Long-term Debt:

The summary of long-term debt is as follows:

	March 31, 2023	December 31, 2022
Senior Secured Term Loan Facility due June 2028 (the "2021 Term Loan Facility")	$ 884,250	$ 886,500
ABL Facility	—	—
Total debt	884,250	886,500
Original issue discount	(7,152)	(7,472)
Deferred financing costs	(3,970)	(4,158)
Total debt, net of original issue discount and deferred financing costs	873,128	874,870
Less: current portion	(9,000)	(9,000)
Total long-term debt, excluding current portion	$ 864,128	$ 865,870

In February 2023, the Company amended the 2021 Term Loan Facility to replace LIBOR with SOFR as the benchmark interest rate. Following this amendment, the 2021 Term Loan Facility bears interest at an adjusted term SOFR, which includes a credit spread adjustment of 10 basis points (with a 0.50% minimum floor) plus 2.75% per annum (or, depending on the Company's first lien net leverage ratio, 2.50%). The interest rate on the 2021 Term Loan Facility was 7.325% as of March 31, 2023.

Also in February 2023, the Company amended its senior secured asset-based revolving credit facility (the "ABL Facility") to replace LIBOR with SOFR as the benchmark interest rate. Following this amendment, the borrowings under the ABL Facility bear interest at a rate equal to an adjusted term SOFR rate or the base rate, which includes a credit spread adjustment of 10 basis points, plus a margin of between 1.25% to 1.75% or 0.25% to 0.75%, respectively. The interest rate on the ABL Facility was 8.50% as of March 31, 2023.

Fair Value of Debt

The fair value of a financial instrument is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. As of March 31, 2023 and December 31, 2022, the fair value of the senior secured term loan facility was $876,513 and $870,986, respectively. The fair value is classified as Level 2 based upon the fair value hierarchy (see Note 4 to these condensed consolidated financial statements for further information on fair value measurements).

12. Financial Instruments:

The Company uses interest rate related derivative instruments to manage its exposure to changes in interest rates on its variable-rate debt instruments. The Company does not speculate using derivative instruments.

By using derivative financial instruments to hedge exposures to changes in interest rates, the Company exposes itself to credit risk and market risk. Credit risk is the failure of the counterparty to perform under the terms of the derivative contract. When the fair value of a derivative contract is an asset, the counterparty owes the Company, which creates credit risk for the Company. When the fair value of a derivative contract is a liability, the Company owes the counterparty and therefore, the Company is not exposed to the counterparty's credit risk in those circumstances. The Company minimizes counterparty credit risk in derivative instruments by entering into transactions with high quality counterparties. The derivative instruments entered into by the Company do not contain credit-risk-related contingent features.

Market risk is the adverse effect on the value of a derivative instrument that results from a change in interest rates. The market risk associated with the Company's derivative instruments is managed by establishing and monitoring parameters that limit the types and degree of market risk that may be undertaken.

Use of Derivative Financial Instruments to Manage Interest Rate Risk. The Company is exposed to fluctuations in interest rates on its senior secured credit facilities. Changes in interest rates will not affect the market value of such debt but will affect the Company's interest payments over the term of the loans. Likewise, an increase in interest rates could have a material impact on the Company's condensed consolidated statements of cash flows. The Company hedges the interest rate fluctuations on debt obligations through interest rate cap agreements. The Company records these agreements at fair value as assets or liabilities in its condensed consolidated balance sheets. As the derivatives are designated and qualify as cash flow hedges, the gains or losses on the interest rate cap agreements are recorded in stockholders' equity as a component of other comprehensive income, net of tax. Reclassifications of the gains and losses on the interest rate cap agreements into earnings are recorded as part of interest expense in the condensed consolidated statements of income as the Company makes its interest payments on the hedged portion of its senior secured credit facilities. Fair value is determined based on estimated amounts that would be received or paid to terminate the contracts at the reporting date based on quoted market prices.

In November 2018, the Company entered into an interest rate cap agreement to mitigate interest volatility from July 2020 through July 2022, with a cap rate of 3.50% on $500,000 of notional variable-rate debt and a $3,380 premium annuitized during the effective period. In February 2020, the Company restructured this agreement to lower the interest cap rate to 2.50% with an incremental $130 premium annuitized during the effective period. In March 2020, the Company again amended such interest rate cap agreement to lower the cap rate to 0.84% for an additional $900 premium annuitized during the effective period. The term and notional amount remained unchanged, with a total cumulative annuitized premium on the $500,000 of notional variable-rate debt of $4,410.

In July 2020, the Company entered into an additional interest rate cap agreement to mitigate interest rate volatility from September 2020 to August 2023, with a cap rate of 1.00% on $400,000 of notional variable-rate debt and a $416 premium annuitized during the effective period. The cap rate in effect at March 31, 2023 was 1.00%.

In January 2022, the Company entered into two new forward starting interest rate cap agreements, with a cap rate of 1.00% on $250,000 of notional variable-rate debt each and a $9,953 of total premium annuitized during the effective period. The term for one interest rate cap is August 2022 through October 2024 and the term for the other interest rate cap is September 2023 through October 2025. The cap rate for the interest rate cap in effect at March 31, 2023 was 1.00%.

In November 2022, the Company entered into a new forward starting interest rate cap agreement to mitigate interest rate volatility from August 2023 through July 2024, with a cap rate of 1.00% on $150,000 of notional variable-rate debt and mitigate interest rate volatility from August 2024 through July 2026, with a cap rate of 1.00% on $175,000 of notional variable-rate debt. The $150,000 of notional variable-debt has $5,372 premium annuitized during the effective period and the $175,000 of notional variable-rate debt has $12,445 premium annuitized during the effective period.

In February 2023, the Company amended all interest rate cap agreements to replace LIBOR with SOFR as the benchmark interest rate, with all other terms of the agreements remaining the same. This amendment changed the previously annuitized premiums on the existing interest rate cap agreements. This resulted in a reduction in the premium annuitized on the $400,000 of notional variable-debt of $172, a reduction in the premium annuitized on the $250,000 of notional variable-debt of $2,022, a reduction in the premium annuitized on the $150,000 of notional variable-debt of $281 and a reduction in the premium annuitized on the $175,000 of notional variable-debt of $651.

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In May 2023, the Company entered into two new forward starting interest rate cap agreements to mitigate interest rate volatility from November 2024 through October 2025, with a cap rate of 1.00% on $200,000 of notional variable-rate debt and mitigate interest rate volatility from November 2025 through October 2026, with a cap rate of 1.00% on $450,000 of notional variable-rate debt. The $200,000 of notional variable-debt has $4,258 premium annuitized during the effective period and the $450,000 of notional variable-rate debt has $9,555 premium annuitized during the effective period.

The fair values of derivative instruments held as of March 31, 2023 and December 31, 2022, respectively are shown below:

	Balance sheet location	March 31, 2023	December 31, 2022
Derivative assets			
Derivatives designated as cash flow hedges:			
Interest rate caps	Prepaid and other current assets	$ 15,996	$ 18,510
Interest rate caps	Other long-term assets	10,516	15,864
Total derivative assets		$ 26,512	$ 34,374
Derivative liabilities			
Derivatives designated as cash flow hedges:			
Interest rate caps	Other long-term liabilities	3,815	2,071
Total derivative liabilities		$ 3,815	$ 2,071

The following table shows the effect of the Company's derivative instruments designated as cash flow hedges on AOCI for the three months ended March 31, 2023 and 2022, respectively:

		Three months ended March 31,			
		2023		2022	
	Location of gain (loss) reclassified from AOCI into income	Amount of gain (loss) recognized in OCI on derivatives	Amount of gain (loss) reclassified from AOCI into income	Amount of gain (loss) recognized in OCI on derivatives	Amount of gain (loss) reclassified from AOCI into income
Interest rate caps	Interest (expense) income	$ (9,605)	$ 698	$ 17,612	$ (683)

The following table shows the effect of the Company's cash flow hedge accounting on the condensed consolidated statements of income for the three months ended March 31, 2023 and 2022, respectively:

	Three months ended March 31,	
	2023	2022
Total amounts of income and expense line items presented in the statement of income in which the effects of cash flow hedges are recorded in interest (expense) income	$ (9,832)	$ (8,450)
The effects of cash flow hedging:		
Gain (loss) on cash flow hedging relationships:		
Interest contracts:		
Amount of gain (loss) reclassified from AOCI into income	698	(683)

The amount of unrealized losses in AOCI related to the Company's cash flow hedges that is expected to be reclassified to the condensed consolidated statement of income over the next twelve months is $7,652 as of March 31, 2023.

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13. Income Taxes:

The effective income tax rate for the three months ended March 31, 2023 was (80.7)% compared to 42.1% for the three months ended March 31, 2022. The Company's effective income tax rate has fluctuated primarily due to the discrete impact related to a shortfall of stock compensation tax deduction which outweighed the tax benefit from the pre-tax loss during the quarter.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the three months ended March 31, 2023 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation and a discrete tax expense associated with the recording of accrued penalties and interest associated with historical uncertain tax positions.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the three months ended March 31, 2022 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation and a discrete tax expense associated with the Employee Retention Credit.

14. Benefit Plans:

The following tables present the components of net periodic expense (benefit) for the Company-sponsored defined benefit pension and postretirement plans, which cover certain employees and retirees located in the U.S.

Defined Benefit Pension Plans

	Three months ended March 31,	
	2023	2022
Interest cost	$ 871	$ 604
Expected return on plan assets	(837)	(1,110)
Net periodic expense (benefit)	$ 34	$ (506)

Other Postretirement Benefit Plan

	Three months ended March 31,	
	2023	2022
Interest cost	$ 6	$ 4
Amortization of prior service credit	(31)	(53)
Amortization of net loss	(1)	1
Net periodic benefit	$ (26)	$ (48)

15. Commitments and Contingent Liabilities:

There is a risk of environmental impact in the Company's manufacturing operations. The Company's environmental policies and practices are designed to comply with existing laws and regulations and to minimize the possibility of significant environmental impact. The Company is also subject to various other lawsuits and claims with respect to matters such as governmental regulations, labor and other actions arising out of the normal course of business. All claims that are probable and reasonably estimable have been accrued for in the Company's condensed consolidated financial statements. When these matters are ultimately concluded and determined, the Company believes that there will be no material adverse effect on its consolidated financial position, results of operations or liquidity.

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16. Reportable Segments:

Summarized financial information for the Company's reportable segments is shown in the following table:

	Three months ended March 31,	
	2023	**2022**
Sales:		
Ecoservices	$ 137,740	$ 154,060
Catalyst Technologies[1]	23,134	25,654
Total	$ 160,874	$ 179,714
Adjusted EBITDA:[2]		
Ecoservices	$ 36,787	$ 49,341
Catalyst Technologies[3]	12,989	16,975
Adjusted EBITDA from reportable segments	$ 49,776	$ 66,316

(1) Excludes the Company's proportionate share of sales from the Zeolyst International and Zeolyst C.V. joint ventures (collectively, the "Zeolyst Joint Venture") accounted for using the equity method (see Note 9 to these condensed consolidated financial statements for further information). The proportionate share of sales excluded is $22,074 and $28,977 for the three months ended March 31, 2023 and 2022, respectively.

(2) The Company defines Adjusted EBITDA as EBITDA adjusted for certain items as noted in the reconciliation below. Management evaluates the performance of its segments and allocates resources based on several factors, of which the primary measure is Adjusted EBITDA. Adjusted EBITDA should not be considered as an alternative to net income as an indicator of the Company's operating performance. Adjusted EBITDA as defined by the Company may not be comparable with EBITDA or Adjusted EBITDA as defined by other companies.

(3) The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $5,436 for the three months ended March 31, 2023, which includes $226 of equity in net income plus $1,601 of amortization of investment in affiliate step-up and $3,609 of joint venture depreciation, amortization and interest.

The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $11,474 for the three months ended March 31, 2022, which includes $5,787 of equity in net income plus $1,601 of amortization of investment in affiliate step-up and $4,087 of joint venture depreciation, amortization and interest.

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A reconciliation of (loss) income before income taxes to Adjusted EBITDA is as follows:

	Three months ended March 31,	
	2023	**2022**
Reconciliation of (loss) income before income taxes to Adjusted EBITDA		
(Loss) income before income taxes	$ (524)	$ 13,595
Interest expense, net	9,832	8,450
Depreciation and amortization	20,197	19,546
Unallocated corporate expenses	6,926	7,076
Joint venture depreciation, amortization and interest	3,609	4,087
Amortization of investment in affiliate step-up	1,601	1,601
Net loss on asset disposals	1,178	133
Foreign exchange (gain) loss	(738)	647
LIFO expense	1,399	245
Transaction and other related costs	1,434	4,281
Equity-based compensation	4,068	7,294
Restructuring, integration and business optimization expenses	1,023	382
Other	(229)	(1,021)
Adjusted EBITDA from reportable segments	$ 49,776	$ 66,316

17. Stock-Based Compensation:

The Company has an equity incentive plan under which it grants common stock awards to employees, directors and affiliates of the Company. At March 31, 2023, 9,158,811 shares of common stock were available for issuance under the plan. The Company settles these awards through the issuance of new shares.

Restricted Stock Units and Performance Stock Units

Restricted Stock Units

During the three months ended March 31, 2023, the Company granted 1,104,690 restricted stock units under its equity incentive plan. Each restricted stock unit provides the recipient with the right to receive a share of common stock subject to graded vesting terms based on service, which for the awards granted during the three months ended March 31, 2023, generally requires approximately one year of service for members of the Company's board of directors and approximately three years of service for employees. The value of the restricted stock units granted during the three months ended March 31, 2023 was based on the average of the high and low trading prices of the Company's common stock on the NYSE on the preceding trading day, in accordance with the Company's policy for valuing such awards. Compensation expense related to the restricted stock units is recognized on a straight-line basis over the respective vesting period.

Performance Stock Units

2023 Grants

During the three months ended March 31, 2023, the Company granted 703,440 performance stock units (at target) under its equity incentive plan. The performance stock units granted during the three months ended March 31, 2023 provide the recipients with the right to receive shares of common stock dependent on the achievement of a total shareholder return ("TSR") goal, and are generally subject to the provision of service through the vesting date of the award. The performance period for the TSR goal is measured based on a three-year performance period from January 1, 2023 through December 31, 2025. The TSR goal is based on the Company's actual TSR percentage increase over the performance period. Depending on the Company's performance relative to the TSR goal, each performance stock unit award recipient is eligible to receive a percentage of the target number of shares granted to the recipient, ranging from zero to 200%. The performance stock units, to the extent earned, will vest on the date the Compensation Committee of the Company's Board of Directors ("Compensation Committee") certifies the achievement of the performance metric for the three-year period ending December 31, 2025, which will occur subsequent to the end of the performance period and after the Company files its annual consolidated financial statements for the year ending December 31, 2025.

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The TSR goal is considered a market condition as opposed to a vesting condition. Because a market condition is not considered a vesting condition, it is reflected in the grant date fair value of the award and the associated compensation cost based on the fair value of the award is recognized over the performance period, regardless of whether the Company actually achieves the market condition or the level of achievement, as long as service is provided by the recipient. The Company used a Monte Carlo simulation to estimate the $12.28 weighted average fair value of the awards granted during the three months ended March 31, 2023, with the following weighted average assumptions:

Expected dividend yield	—	%
Risk-free interest rate	3.80	%
Expected volatility	48.82	%
Expected term (in years)	2.96	

2020 Grants

During the three months ended March 31, 2023, the Compensation Committee certified the achievement of the performance metrics for the three-year period ended December 31, 2022, related to the performance stock units ("PSUs") granted during the year ended December 31, 2020. Fifty percent of the target number of such PSUs could be earned depending on performance against a Company-specific financial performance target, and 50% of the target number of such PSUs could be earned depending on performance against a TSR goal, subject to the provision of service through the vesting date of the awards. The Company-specific financial performance target and the TSR goal were measured independently of each other, and each PSU award recipient was eligible to earn a percentage of the target number of shares granted to the recipient, ranging from zero to 200%. The awards vested during the three months ended March 31, 2023 as follows: 53.3% of target with respect to the portion of the PSU award subject to the Company-specific financial measure, and 56.0% of target with respect to the portion of the PSU award subject to the TSR goal.

Award Activity

The following table summarizes the activity for the Company's restricted stock units and performance stock units for the three months ended March 31, 2023:

	Restricted Stock Units		Performance Stock Units	
	Number of Units	Weighted Average Grant Date Fair Value (per share)	Number of Units	Weighted Average Grant Date Fair Value (per share)
Nonvested as of December 31, 2022	2,464,718	$ 11.73	639,532 [(1)]	$ 16.32
Granted	1,104,690	$ 9.85	703,440	$ 12.28
Vested	(821,901)	$ 13.04	(200,204)	$ 20.48
Forfeited	(160,316)	$ 10.96	(183,864)	$ 19.50
Nonvested as of March 31, 2023	2,587,191	$ 10.55	958,904 [(1)]	$ 11.87

(1) Based on target.

During the three months ended March 31, 2023, the Company also granted 5,081 restricted stock awards with a weighted average grant date fair value of $9.84 per share that immediately vested.

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Stock-Based Compensation Expense

For the three months ended March 31, 2023 and 2022, stock-based compensation expense for the Company was $4,068 and $7,294, respectively. The associated income tax benefit based on the applicable statutory rate recognized in the condensed consolidated statements of income for the three months ended March 31, 2023 and 2022 was $973 and $1,788, respectively.

Performance-based restricted stock awards and performance-based stock options would vest only on the achievement with respect to shares of our common stock of an average closing trading price equal or exceeding, in any ten trading-day period, the lowest amount which, when multiplied by the number of shares of our common stock then held by investment funds affiliated with CCMP Capital Advisors, LP (“CCMP”) and added to the aggregate net proceeds received by investment funds affiliated with CCMP with respect to their shares of capital stock of the Company, would yield a quotient of equal or greater than two when divided by the equity investment in the Company by investment funds affiliated with CCMP (such quotient, the “MOI Target”). On March 7, 2023, all of the outstanding performance-based stock options (284,956 options) and performance-based restricted shares (277,056 shares) that would vest upon the achievement of the MOI Target were canceled due to the failure of the MOI Target to be achieved upon the sale by investment funds affiliated with CCMP of all of their remaining shares of our common stock. No expense had previously been recognized for either the restricted stock awards or the stock options subject to this performance condition, as the condition was not achieved nor was previously considered probable of achievement.

As of March 31, 2023, unrecognized compensation cost was $19,668 for restricted stock units and $8,827 for performance stock units considered probable of vesting. The weighted-average period over which these costs are expected to be recognized at March 31, 2023 was 1.62 years for the restricted stock units and 2.62 years for the performance stock units.

18. Earnings per Share:

Basic earnings per share is calculated as income (loss) available to common stockholders, divided by the weighted average number of common shares outstanding during the period. The weighted average number of common shares outstanding during the period for the computation of basic earnings per share excludes restricted stock awards that have legally been issued but are nonvested during the period, as the sale of these shares is prohibited pending satisfaction of certain vesting conditions by the award recipients in order to earn the rights to the shares.

Diluted earnings per share is calculated as income (loss) available to common stockholders, divided by the weighted average number of common and potential common shares outstanding during the period, if dilutive. Potential common shares reflect (1) unvested restricted stock awards and restricted stock units with service vesting conditions, (2) performance stock units with vesting conditions considered probable of achievement and (3) options to purchase common stock, all of which have been included in the diluted earnings per share calculation using the treasury stock method.

The reconciliation from basic to diluted weighted average shares outstanding is as follows:

	Three months ended March 31,	
	2023	2022
Weighted average shares outstanding – Basic	122,178,867	137,684,773
Dilutive effect of unvested common shares and restricted stock units with service conditions, performance stock units considered probable of vesting and assumed stock option exercises and conversions	—	1,064,292
Weighted average shares outstanding – Diluted	122,178,867	138,749,065

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Basic and diluted (loss) income per share are calculated as follows:

	Three months ended March 31, 2023	Three months ended March 31, 2022
Numerator:		
Net (loss) income attributable to Ecovyst Inc.	$ (1,471)	$ 7,875
Denominator:		
Weighted average shares outstanding – Basic	122,178,867	137,684,773
Weighted average shares outstanding – Diluted	122,178,867	138,749,065
Net (loss) income per share:		
Basic (loss) income per share	$ (0.01)	$ 0.06
Diluted (loss) income per share	$ (0.01)	$ 0.06

The table below presents the details of the Company's weighted average equity-based awards outstanding during each respective period that were excluded from the calculation of diluted earnings per share:

	Three months ended March 31, 2023	Three months ended March 31, 2022
Restricted stock awards with performance only targets not achieved	200,096	613,903
Stock options with performance only targets not achieved	208,968	326,689
Anti-dilutive restricted stock units and performance stock units[(1)]	432,308	—
Anti-dilutive stock options[(1)]	695,777	807,301

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(1) Does not include 1,044,098 of restricted stock units and performance stock units, and352,771 of stock options, for the three months ended March 31, 2023 due to the net loss attributable to Ecovyst Inc. for the period.

Restricted stock awards and stock options with performance only vesting conditions were not included in the dilution calculation, as the performance targets have not been achieved nor were probable of achievement as of the end of the respective periods. These awards and stock options were canceled on March 7, 2023 (see Note 17 to these condensed consolidated financial statements for additional information). Certain stock options to purchase shares of common stock were excluded from the computation of diluted earnings per share for the respective periods because the options' exercise price was greater than the average market price of the common shares. These stock options and anti-dilutive awards are not included in the dilution calculation, as their inclusion would have the effect of increasing diluted income per share or reducing diluted loss per share.

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19. Supplemental Cash Flow Information:

The following table presents supplemental cash flow information for the Company:

	Three months ended March 31,	
	2023	2022
Cash paid during the period for:		
Income taxes, net of refunds	$ 136	$ 10,662
Interest	15,185	8,363
Non-cash investing activity:		
Capital expenditures acquired on account but unpaid as of the period end	650	4,674
Right-of-use assets obtained in exchange for new lease liabilities (non-cash):		
Operating leases	1,621	2,955

20. Subsequent Events:

In May 2023, the Company entered into two new forward starting interest rate cap agreements for $200,000 of notional variable-debt and $450,000 of notional variable-debt. See Note 12 to these condensed consolidated financial statements for additional details.

Other than this item, the Company has evaluated subsequent events since the balance sheet date and determined that there are no additional items to disclose.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

Unless the context requires otherwise, references in this report to "Ecovyst," "the company," "we," "us" or "our" refer to Ecovyst Inc. and its consolidated subsidiaries.

Forward-looking Statements

This periodic report on Form 10-Q ("Form 10-Q") includes "forward-looking statements" that express our opinions, expectations, beliefs, plans, objectives, assumptions or projections regarding future events or future results. The words "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "expect," "should" and similar expressions are intended to identify these forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy, short- and long-term business operations and objectives, and financial needs. Examples of forward-looking statements include, but are not limited to, statements we make regarding demand trends, and/or Russia's invasion of Ukraine and related economic effects on our operations and financial results and our liquidity, and our belief that our current level of operations, cash and cash equivalents, cash flow from operations and borrowings under our credit facilities and other lines of credit will provide us adequate cash to fund the working capital, capital expenditure, debt service and other requirements for our business for at least the next twelve months.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions. Moreover, we operate in a very competitive and rapidly changing environment and new risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed herein may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

Some of the key factors that could cause actual results to differ from our expectations include the following risks related to our business:

- as a global business, we are exposed to local business risks in different countries;
- we are affected by general economic conditions and economic downturns;
- exchange rate fluctuations could adversely affect our financial condition, results of operations and cash flows;
- our international operations require us to comply with anti-corruption laws, trade and export controls and regulations of the U.S. government and various international jurisdictions in which we do business;
- alternative technology or other changes in our customers' products may reduce or eliminate the need for certain of our products;
- our new product development and research and development efforts may not succeed and our competitors may develop more effective or successful products;
- our substantial level of indebtedness could adversely affect our financial condition;
- if we are unable to manage the current and future inflationary environment and to pass on increases in raw material prices, including natural gas, or labor costs to our customers or to retain or replace our key suppliers, our results of operations and cash flows may be negatively affected;
- we face substantial competition in the industries in which we operate;
- we are subject to the risk of loss resulting from non-payment or non-performance by our customers;
- we rely on a limited number of customers for a meaningful portion of our business;
- multi-year customer contracts in our Ecoservices segment are subject to potential early termination and such contracts may not be renewed at the end of their respective terms;
- our quarterly results of operations are subject to fluctuations because demand for some of our products is seasonal;
- our growth projects may result in significant expenditures before generating revenues, if any, which may materially and adversely affect our ability to implement our business strategy;
- we may be liable to damages based on product liability claims brought against us or our customers for costs associated with recalls of our or our customers' products;

- we are subject to extensive environmental, health and safety regulations and face various risks associated with potential non-compliance or releases of hazardous materials;
- existing and proposed regulations to address climate change by limiting greenhouse gas emissions may cause us to incur significant additional operating and capital expenses and may impact our business and results of operations;
- production and distribution of our products could be disrupted for a variety of reasons, including as a result of supply chain constraints, and such disruptions could expose us to significant losses or liabilities;
- the insurance that we maintain may not fully cover all potential exposures;
- we could be subject to damages based on claims brought against us by our customers or lose customers as a result of the failure of our products to meet certain quality specifications;
- our failure to protect our intellectual property and infringement on the intellectual property rights of third parties;
- disruption, failure or cyber security breaches affecting or targeting computers and infrastructure used by us or our business partners may adversely impact our business and operations
- the impact of the COVID-19 pandemic on the global economy and financial markets, as well as on our business and our suppliers, and the response of governments and of our company to the outbreak, including variants of the virus and associated containment, remediation and vaccination efforts; and
- other factors set forth in Part I, "Item 1A. Risk Factors" in our Annual Report on Form 10-K for the year ended December 31, 2022, as supplemented in "Item 1A, Risk Factors" in our quarterly report on Form 10-Q for the quarter ended March 31, 2023.

The forward-looking statements included herein are made only as of the date hereof. You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this Form 10-Q to conform these statements to actual results or to changes in our expectations.

Overview

We are a leading, integrated and innovative global provider of specialty catalysts and services. We believe that our products, which are predominantly inorganic, and services contribute to improving the sustainability of the environment.

We conduct operations through two reporting segments: (1) Ecoservices and (2) Catalyst Technologies (including our 50% interest in the Zeolyst Joint Venture).

Ecoservices: We are a leading provider of sulfuric acid recycling services to North American refineries for the production of alkylate, an essential gasoline component for lowering vapor pressure and increasing octane to meet stringent gasoline specifications and fuel efficiency standards. We are also a leading North American producer of on-purpose virgin sulfuric acid for water treatment, mining and industrial applications.

Catalyst Technologies: We are a global supplier of finished silica catalysts and catalyst supports necessary to produce high strength and high stiffness plastics used in packaging films, bottles, containers, and other molded applications. This segment includes our 50% interest in the Zeolyst Joint Venture, where we are a leading global supplier of zeolites used for catalysts that help produce renewable fuels, remove nitrogen oxides from diesel engine emissions as well as sulfur from fuels during the refining process.

Impact of Russia's invasion of Ukraine on our Business and Results

We are continuing to monitor the developments in Russia and Ukraine, as well as the related economic sanctions and export controls imposed on certain industry sectors. Although the current conflict has created global economic and political uncertainties and affected certain supply chain disruptions, we do not believe we have significant exposure in those countries. We have no operations in Russia or Ukraine. We had no sales to customers in Ukraine or in Russia for the three months ended March 31, 2023. Sales to a customer in Russia were immaterial for the three months ended March 31, 2022. We also did not make any purchases from suppliers in Russia or Ukraine. As Russia's invasion of Ukraine continues to unfold, we will continue to monitor compliance with sanctions imposed by the U.S. government and other countries.

Impact of Winter Storm Elliott

Late in the fourth quarter of 2022, our Ecoservices business was adversely impacted by Winter Storm Elliott. The storm disrupted operations at a number of our facilities, impacting production and resulting in unplanned repair and maintenance costs and lower virgin sulfuric acid sales volume. While the storm had a modest impact on fourth quarter 2022 financial results, the production outages arising from Winter Storm Elliott limited our ability to produce inventory in advance of significant planned turnaround activity and to meet customer demand, resulting in constrained availability and lower sales of virgin sulfuric acid in the first quarter of 2023.

Stock Repurchase Program

On April 27, 2022, the Board approved a stock repurchase program that permits the Company to purchase up to $450,000 of the Company's common stock over the four-year period from the date of approval. For the three months ended March 31, 2023, in connection with a secondary offering of the Company's common stock in March 2023, the Company repurchased 3,000,000 shares of its common stock sold in the offering from the underwriter at an average price of $9.95 per share concurrently with the closing of the offering, for a total of $29.9 million.

As of March 31, 2023, $283.4 million was available for additional share repurchases under the program.

Key Performance Indicators

Adjusted EBITDA and Adjusted Net Income

Adjusted EBITDA and adjusted net income are financial measures that are not prepared in accordance with accounting principles generally accepted in the United States ("GAAP") and that we use to evaluate our operating performance, for business planning purposes and to measure our performance relative to that of our competitors. Adjusted EBITDA and adjusted net income are presented as key performance indicators as we believe these financial measures will enhance a prospective investor's understanding of our results of operations and financial condition. EBITDA consists of net income (loss) attributable to continuing operations before interest, taxes, depreciation and amortization. Adjusted EBITDA consists of EBITDA adjusted for (i) non-operating income or expense, (ii) the impact of certain non-cash, nonrecurring or other items included in net income (loss) and EBITDA that we do not consider indicative of our ongoing operating performance, and (iii) depreciation, amortization and interest of our 50% share of the Zeolyst Joint Venture. Adjusted net income consists of net income (loss) attributable to Ecovyst Inc. adjusted for (i) non-operating income or expense and (ii) the impact of certain non-cash, nonrecurring or other items included in net income (loss) that we do not consider indicative of our ongoing operating performance. We believe that these non-GAAP financial measures provide investors with useful financial metrics to assess our operating performance from period-to-period by excluding certain items that we believe are not representative of our core business.

You should not consider adjusted EBITDA or adjusted net income in isolation or as alternatives to the presentation of our financial results in accordance with GAAP. The presentation of adjusted EBITDA and adjusted net income financial measures may differ from similar measures reported by other companies and may not be comparable to other similarly titled measures. In evaluating adjusted EBITDA and adjusted net income, you should be aware that we are likely to incur expenses similar to those eliminated in this presentation in the future and that certain of these items could be considered recurring in nature. Our presentation of adjusted EBITDA and adjusted net income should not be construed as an inference that our future results will be unaffected by unusual or nonrecurring items. Reconciliations of adjusted EBITDA and adjusted net income to GAAP net income (loss) are included in the results of operations discussion that follows for each of the respective periods.

Key Factors and Trends Affecting Operating Results and Financial Condition

Sales

Overall, our Ecoservices and Catalyst Technologies segments continued to benefit from positive demand trends for our products and services in the industries we serve. Strong domestic and export demand for refined products continued to support high refinery utilization rates, while more stringent gasoline standards and growing demand for premium gasoline to power higher-compression and turbocharged engines continued to drive demand for alkylate and for our regeneration services. Global polyethylene demand remained positive, driven by the long-term growth in consumer demand for films and packaging, supporting sales of our silica-based catalysts, while increasing demand for renewable fuels and more stringent regulation is renewable fuels and polyethylene, and in emission control applications.

Sales in our Ecoservices and Catalyst Technologies segments are made on both a purchase order basis and pursuant to long-term contracts.

Our Catalyst Technologies segment may experience demand fluctuations based upon the timing of some of our customer's fixed bed catalyst replacements.

Cost of Goods Sold

Cost of goods sold consists of variable product costs, fixed manufacturing expenses, depreciation expense and freight expenses. Variable product costs include all raw materials, energy and packaging costs that are directly related to the manufacturing process. Fixed manufacturing expenses include all plant employment costs, manufacturing overhead and periodic maintenance costs.

The primary raw materials for our Ecoservices segment include spent sulfuric acid, sulfur, acids, bases (including sodium hydroxide, or "caustic soda"), and certain metals. Spent sulfuric acid for our Ecoservices segment is supplied by customers. The primary raw materials used in the manufacture of products in our Catalyst Technologies segments include sodium silicate and cesium hydroxide.

Most of our Ecoservices contracts feature take-or-pay volume protection and/or quarterly price adjustments for commodity inputs, labor, the Chemical Engineering Index (U.S. chemical plant construction cost index) and natural gas. Over 80% of our Ecoservices segment sales for the year ended December 31, 2022 were under contracts featuring quarterly price adjustments. The price adjustments generally reflect actual costs for producing acid and tend to protect us from volatility in labor, fixed costs and raw material pricing. The take-or-pay volume protection allows us to cover fixed costs through intermittent, temporary production issues at customer refineries.

While natural gas is not a direct feedstock for any product, natural gas powered machinery and equipment are used to heat raw materials and create the chemical reactions necessary to produce end-products. We maintain multiple suppliers wherever possible and structure our customer contracts when possible to allow for the pass-through of raw material, labor and natural gas costs.

Joint Venture

We account for our investments in our equity joint ventures under the equity method. Our joint venture, the Zeolyst Joint Venture, manufactures high performance, specialty, zeolite-based catalysts, emission control, refining and petrochemical industries and other areas of the broader chemicals industry. Demand for the Zeolyst Joint Venture products fluctuates based upon the timing of our customer's fixed bed catalyst replacements. We share proportionally in the management of our joint venture with the other parties to such joint venture.

Seasonality

Our regeneration services product group, which is a part of our Ecoservices segment, typically experiences seasonal fluctuations as a result of higher demand for gasoline products in the summer months and lower demand in the winter months. These demand fluctuations result in higher sales and working capital requirements in the second and third quarter.

Foreign Currency

As a global business, we are subject to the impact of gains and losses on currency translations, which occur when the financial statements of foreign operations are translated into U.S. dollars. We operate in various geographies with approximately 6% of our sales for the three months ended March 31, 2023 and for the year ended December 31, 2022 in currencies other than the U.S. dollar. Because our consolidated financial results are reported in U.S. dollars, sales or earnings generated in currencies other than the U.S. dollar can result in a significant increase or decrease in the amount of those sales and earnings when translated to U.S. dollars. The foreign currency to which we have the most significant exchange rate exposure is the British pound.

Results of Operations

Three Months Ended March 31, 2023 Compared to the Three Months Ended March 31, 2022

Highlights

The following is a summary of our financial performance for the three months ended March 31, 2023 compared with the three months ended March 31, 2022.

Sales

- Sales decreased $18.8 million to $160.9 million. The decrease in sales was primarily due to lower sales volume, partially offset by favorable average selling price.

Gross Profit

- Gross profit decreased $11.2 million to $36.5 million. The decrease in gross profit was primarily due to lower sales volume and higher manufacturing costs.

Operating Income

- Operating income decreased by $7.8 million to $8.7 million. The decrease in operating income was due to a decrease in sales and gross profit.

Equity in Net Income of Affiliated Companies

- Equity in net income of affiliated companies for the three months ended March 31, 2023 was $0.2 million, compared with $5.7 million for the three months ended March 31, 2022. The decrease of $5.5 million was due to lower sales volume driven by timing of customer orders from the Zeolyst Joint Venture during the three months ended March 31, 2023.

The following is our unaudited condensed consolidated statements of income and a summary of financial results for the three months ended March 31, 2023 and 2022:

	Three months ended March 31,		Change	
	2023	**2022**	**$**	**%**
	(in millions, except percentages)			
Sales	$ 160.9	$ 179.7	$ (18.8)	(10.5)%
Cost of goods sold	124.4	132.0	(7.6)	(5.8)%
Gross profit	36.5	47.7	(11.2)	(23.5)%
Gross profit margin	*22.7 %*	*26.6 %*		
Selling, general and administrative expenses	21.1	23.5	(2.4)	(10.2)%
Other operating expense, net	6.7	7.7	(1.0)	(13.0)%
Operating income	8.7	16.5	(7.8)	(47.3)%
Operating income margin	*5.4 %*	*9.1 %*		
Equity in net (income) from affiliated companies	(0.2)	(5.7)	5.5	(96.5)%
Interest expense, net	9.9	8.5	1.4	16.5 %
Other (income) expense, net	(0.4)	0.1	(0.5)	(500.0)%
(Loss) income before income taxes and noncontrolling interest	(0.6)	13.6	(14.2)	(104.4)%
Provision for income taxes	0.9	5.7	(4.8)	(84.2)%
Effective tax rate	*(180.7)%*	*42.1 %*		
Net (loss) income attributable to Ecovyst Inc	$ (1.5)	$ 7.9	$ (9.4)	(119.0)%

Sales

	Three months ended March 31,		Change	
	2023	2022	$	%
Sales:	(in millions, except percentages)			
Ecoservices	$ 137.8	$ 154.0	$ (16.2)	(10.5)%
Catalyst Technologies	23.1	25.7	(2.6)	(10.1)%
Total sales	$ 160.9	$ 179.7	$ (18.8)	(10.5)%

Ecoservices: Sales in Ecoservices for the three months ended March 31, 2023 were $137.8 million, a decrease of $16.2 million, or 10.5%, compared to sales of $154.0 million for the three months ended March 31, 2022. The decrease in sales reflects lower sales volume of $26.4 million, partially offset by higher average selling pricing of $10.2 million after the pass-through of sulfur costs of approximately $5.2 million.

Sales volume was lower primarily due to lower virgin sulfuric acid sales associated with the adverse impact of Winter Storm Elliott and extended maintenance turnaround activity at one of our facilities, limit our ability to produce inventory in advance of significant planned turnaround activity to meet customer demand during the three months ended March 31, 2023. Higher average selling prices were driven by favorable pricing in regeneration services, including the pass-through of higher freight, labor, and energy indexed costs partially offset by lower pass-through of sulfur costs in virgin sulfuric acid of $5.2 million.

Catalyst Technologies: Sales in Catalyst Technologies for the three months ended March 31, 2023 were $23.1 million, a decrease of $2.6 million, or 10.1%, compared to sales of $25.7 million for the three months ended March 31, 2022. The decrease in sales was due to lower sales volume of $3.6 million and the unfavorable effects of foreign currency of $0.9 million, partially offset by higher average selling prices of $1.9 million.

The decrease in sales volume was primarily driven by lower polyethylene catalysts sales during the three months ended March 31, 2023, driven in part by the economic sanctions associated with the developments in Russia and Ukraine. Higher average selling prices during the three months ended March 31, 2023 was driven by implemented price increases.

Gross Profit

Gross profit for the three months ended March 31, 2023 was $36.5 million, a decrease of $11.2 million, or 23.5%, compared with $47.7 million for the three months ended March 31, 2022. The decrease in gross profit reflects a $11.0 million contribution associated with lower sales volumes and higher manufacturing costs of $12.3 million, partially offset by higher average selling prices of $12.1 million.

The decrease in gross profit was driven by lower sales volume in the Ecoservices business, offset by favorable pricing and pass-through of higher variable costs.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the three months ended March 31, 2023 was $21.1 million, a decrease of $2.4 million as compared to $23.5 million for the three months ended March 31, 2022. The decrease in selling, general and administrative expenses was mainly due to a decrease in stock-based compensation expense of $3.2 million due to fewer awards granted, lower dividend equivalents, and lower expense for the three months ended March 31, 2023.

Other Operating Expense, Net

Other operating expense, net for the three months ended March 31, 2023 was $6.7 million, a decrease of $1.0 million, compared with $7.7 million for the three months ended March 31, 2022. The decrease in other operating expense, net was mainly driven by a decrease of $2.8 million in transactions costs, primarily associated with the sale of the Performance Chemicals business, offset by an increase in net losses on asset disposals of $1.0 million, primarily related to costs associated with Winter Storm Elliott.

Equity in Net Income of Affiliated Companies

Equity in net income of affiliated companies for the three months ended March 31, 2023 was $0.2 million, compared to $5.7 million for the three months ended March 31, 2022. The decrease was primarily due to lower earnings from the Zeolyst Joint Venture largely due to the comparative timing of customer orders for hydrocracking and specialty catalysts sales during the three months ended March 31, 2023.

Interest Expense, Net

Interest expense, net for the three months ended March 31, 2023 was $9.9 million, an increase of $1.4 million, as compared with $8.5 million for the three months ended March 31, 2022. The increase in interest expense, net was primarily due to rising interest rates, partially offset by lower debt principal outstanding and the benefits associated with our interest rate caps.

Other (Income) Expense, Net

Other income, net for the three months ended March 31, 2023 was $0.4 million, a decrease of $0.5 million, as compared to other expense, net of $0.1 million for the three months ended March 31, 2022. The change in other (income) expense, net primarily consisted of foreign currency exchange gains of $1.1 million related to the non-permanent intercompany debt denominated in local currency and translated to the U.S. dollar. This was offset by net periodic pension benefit of $0.6 million for the defined benefit pension and postretirement plans for the three months ended March 31, 2022.

Provision for Income Taxes

The provision for income taxes for the three months ended March 31, 2023 was $0.9 million compared to a $5.7 million for the three months ended March 31, 2022. The effective income tax rate for the three months ended March 31, 2023 was (180.7)% compared to 42.1% for the three months ended March 31, 2022.

The Company’s effective income tax rate fluctuated primarily due to the discrete impact related to a shortfall of stock compensation tax deduction which outweighed the tax benefit from the pre-tax loss during the quarter.

The difference between the U.S. federal statutory income tax rate and the Company’s effective income tax rate for the three months ended March 31, 2023 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation and a discrete tax expense associated with the recording of accrued penalties and interest associated with historical uncertain tax positions.

Net (Loss) income Attributable to Ecovyst

For the foregoing reasons, net loss attributable to Ecovyst was $1.5 million for the three months ended March 31, 2023 compared to net income of $7.9 million for the three months ended March 31, 2022.

Adjusted EBITDA

Summarized Adjusted EBITDA information is shown below in the following table:

	Three months ended March 31,		Change	
	2023	**2022**	**$**	**%**
	(in millions, except percentages)			
Adjusted EBITDA:[1]				
Ecoservices	$ 36.8	$ 49.3	$ (12.5)	(25.4)%
Catalyst Technologies[2]	13.0	17.0	(4.0)	(23.5)%
Unallocated corporate expenses	(6.9)	(7.1)	0.2	(2.8)%
Total	$ 42.9	$ 59.2	$ (16.3)	(27.5)%

(1) We define Adjusted EBITDA as EBITDA adjusted for certain items as noted in the reconciliation below. Our management evaluates the performance of our segments and allocates resources based primarily on Adjusted EBITDA. Adjusted EBITDA does not represent cash flow for periods presented and should not be considered as an alternative to net income as an indicator of our operating performance or as an alternative to cash flows as a source of liquidity. Adjusted EBITDA may not be comparable with EBITDA or Adjusted EBITDA as defined by other companies.

(2) The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $5.4 million for the three months ended March 31, 2023, which includes $0.2 million of equity in net income, excluding $1.6 million of amortization of investment in affiliate step-up plus $3.6 million of joint venture depreciation, amortization and interest.

The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $11.5 million for the three months ended March 31, 2022, which includes $5.8 million of equity in net income, excluding $1.6 million of amortization of investment in affiliate step-up plus $4.1 million of joint venture depreciation, amortization and interest.

Ecoservices: Adjusted EBITDA for the three months ended March 31, 2023 was $36.8 million, a decrease of $12.5 million, or 25.4%, compared with $49.3 million for the three months ended March 31, 2022. The decrease in Adjusted EBITDA was primarily a result of lower virgin sulfuric acid sales volume related to Winter Storm Elliott and the extended maintenance turnaround activity, higher unplanned repair and maintenance costs and costs associated with planned turnaround activity, partially offset by higher pricing for regeneration services.

Catalyst Technologies: Adjusted EBITDA for the three months ended March 31, 2023 was $13.0 million, a decrease of $4.0 million, or 23.5%, compared with $17.0 million for the three months ended March 31, 2022. The decrease in Adjusted EBITDA was due to lower volume on timing of customer orders, partially offset by continued strong pricing and favorable product mix.

A reconciliation of net (loss) income to Ecovyst Inc. to Adjusted EBITDA is as follows:

	Three months ended March 31, 2023	Three months ended March 31, 2022
	(in millions)	
Reconciliation of net (loss) income attributable to Ecovyst Inc. to Adjusted EBITDA		
Net (loss) income attributable to Ecovyst Inc.	$ (1.5)	$ 7.9
Provision for income taxes	0.9	5.7
Interest expense, net	9.9	8.5
Depreciation and amortization	20.2	19.5
EBITDA	29.5	41.6
Joint venture depreciation, amortization and interest[(a)]	3.6	4.1
Amortization of investment in affiliate step-up[(b)]	1.6	1.6
Net loss on asset disposals[(c)]	1.2	0.1
Foreign currency exchange (gain) loss[(d)]	(0.7)	0.6
LIFO expense[(e)]	1.4	0.2
Transaction and other related costs[(f)]	1.4	4.3
Equity-based compensation	4.1	7.3
Restructuring, integration and business optimization expenses[(g)]	1.0	0.4
Other[(h)]	(0.2)	(1.0)
Adjusted EBITDA	$ 42.9	$ 59.2

(a) We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Catalyst Technologies segment includes our 50% interest in the Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of the Zeolyst Joint Venture.

(b) Represents the amortization of the fair value adjustments associated with the equity affiliate investment in the Zeolyst Joint Venture as a result of the combination of the businesses of PQ Holdings Inc. and Eco Services Operations LLC in May 2016. We determined the fair value of the equity affiliate investment and the fair value step-up was then attributed to the underlying assets of the Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with fixed assets and intangible assets, including customer relationships and technical know-how.

(c) When asset disposals occur, we remove the impact of net gain/loss of the disposed asset because such impact primarily reflects the non-cash write-off of long-lived assets no longer in use.

(d) Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income related to the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.

(e) Represents non-cash adjustments to the Company's LIFO reserves for certain inventories in the U.S. that are valued using the LIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.

(f) Relates to certain transaction costs, including debt financing, due diligence and other costs related to transactions that are completed, pending or abandoned, that we believe are not representative of our ongoing business operations.

(g) Includes the impact of restructuring, integration and business optimization expenses, which are incremental costs that are not representative of our ongoing business operations.

(h) Other consists of adjustments for items that are not core to our ongoing business operations. These adjustments include environmental remediation and other legal costs, expenses for capital and franchise taxes, and defined benefit pension and postretirement plan (benefits) costs, for which our obligations are under plans that are frozen. Also included in this amount are adjustments to eliminate the benefit realized in cost of goods sold of the allocation of a portion of the contract manufacturing payments under the five-year agreement with the buyer of the Performance Chemicals business to the financing obligation under the failed sale-leaseback. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).

Adjusted Net Income

Summarized adjusted net income information is shown below in the following table:

	Three months ended March 31,					
	2023			2022		
	Pre-tax amount	Tax expense (benefit)	After-tax amount	Pre-tax amount	Tax expense (benefit)	After-tax amount
	(in millions)					
Reconciliation of net (loss) income attributable to Ecovyst Inc. to Adjusted Net Income[(1)(2)]						
Net (loss) income attributable to Ecovyst Inc.	$ (0.6)	$ 0.9	$ (1.5)	$ 13.6	$ 5.7	$ 7.9
Amortization of investment in affiliate step-up[(b)]	1.6	0.4	1.2	1.6	0.4	1.2
Net loss on asset disposals[(c)]	1.2	0.3	0.9	0.1	—	0.1
Foreign currency exchange (gain) loss[(d)]	(0.7)	(0.1)	(0.6)	0.6	0.1	0.5
LIFO expense[(e)]	1.4	0.4	1.0	0.2	0.1	0.1
Transaction and other related costs[(f)]	1.4	0.4	1.0	4.3	1.0	3.3
Equity-based compensation[(3)]	4.1	(0.1)	4.2	7.3	(0.3)	7.6
Restructuring, integration and business optimization expenses[(g)]	1.0	0.1	0.9	0.4	0.1	0.3
Other[(h)]	(0.2)	0.1	(0.3)	(1.0)	(0.3)	(0.7)
Adjusted Net Income	$ 9.2	$ 2.4	$ 6.8	$ 27.1	$ 6.8	$ 20.3

(1) We define adjusted net income as net income attributable to Ecovyst adjusted for non-operating income or expense and the impact of certain non-cash or other items that are included in net income that we do not consider indicative of our ongoing operating performance. Adjusted net income is presented as a key performance indicator as we believe it will enhance a prospective investor's understanding of our results of operations and financial condition. Adjusted net income may not be comparable with net income or adjusted net income as defined by other companies.

(2) Refer to the Adjusted EBITDA notes above for more information with respect to each adjustment.

(3) Includes tax adjustments for the shortfall in stock compensation.

The adjustments to net income attributable to Ecovyst Inc. are shown net of applicable tax rates of 25.6% and 24.7% for the three months ended March 31, 2023 and 2022, respectively, except for the foreign currency exchange (gain) loss and equity-based compensation. The tax effect on equity-based compensation is derived by removing the tax effect of any equity-based compensation expense disallowed as a result of its inclusion within IRC Sec. 162m, and adding the tax effect of equity-based stock compensation shortfall recorded as a discrete item. The tax effect of the foreign currency exchange (gain) loss is derived from tax effecting the actual year to date foreign currency exchange (gain) loss by the respective local country statutory rates which is recorded as a discrete item.

Financial Condition, Liquidity and Capital Resources

Our primary sources of liquidity consist of cash flows from operations, existing cash balances as well as funds available under our asset based lending revolving credit facility ("ABL Facility"). We expect that ongoing requirements for debt service and capital expenditures will be funded from these sources of funds. Our primary liquidity requirements include funding working capital requirements (primarily inventory and accounts receivable, net of accounts payable and other accrued liabilities), debt service requirements and capital expenditures. Our capital expenditures include both maintenance of business, which include spending on maintenance and health, safety and environmental initiatives as well as growth, which includes spending to drive organic sales growth and cost savings initiatives.

We believe that our existing cash, cash equivalents and cash flows from operations, combined with availability under our asset based lending revolving credit facility, will be sufficient to meet our presently anticipated future cash needs for at least the next twelve months. We may also pursue strategic acquisition or divestiture opportunities, which may impact our future cash requirements. We may, from time to time, increase borrowings under our asset based lending revolving credit facility to meet our future cash needs. As of March 31, 2023, we had cash and cash equivalents of $61.6 million and availability of $57.3 million under our asset based lending revolving credit facility, after giving effect to $4.1 million of outstanding letters of credit, for a total available liquidity of $118.9 million. We did not have any revolving credit facility borrowings as of March 31, 2023. As of March 31, 2023, we were in compliance with all covenants under our debt agreements.

Our ABL Facility has one financial covenant with two ratios to maintain. The first ratio compares the total ABL availability against a threshold: the greater of 10% of the line cap (which is defined as the lesser of our revolving loan commitments and the value of our assets) or $20.0 million. The greater of this threshold cannot be greater than the total availability of the ABL Facility. The second ratio compares the ABL Facility availability of the U.S. revolving credit facility against a $15.0 million threshold. As of March 31, 2023, we were in compliance with the financial covenant under the ABL Facility.

The 2021 Term Loan Facility and the ABL Facility contain various restrictive covenants. Each limits the ability of the Company and its restricted subsidiaries to incur certain indebtedness or liens, merge, consolidate or liquidate, dispose of certain property, make investments or declare or pay dividends, make optional payments, modify certain debt instruments, enter into certain transactions with affiliates, enter into certain sales and leasebacks, and certain other non-financial restrictive covenants. During such time, the Company is required to maintain a fixed-charge coverage ratio of at least 1.0 to 1.0. The Company was in compliance with all debt covenants under the 2021 Term Loan Facility and the ABL Facility as of March 31, 2023.

Included in our cash and cash equivalents balance as of March 31, 2023 was $19.6 million of cash and cash equivalents in foreign jurisdictions. Depending on foreign cash balances, we have certain flexibility to repatriate funds should the need arise. Should the need arise, we would repatriate the funds in the most tax efficient manner from those subsidiaries. Repatriation of foreign cash is generally not subject to U.S. federal income taxes at the time of cash distribution. However, foreign earnings may still be taxed for state income tax purposes, as well as subject to certain foreign withholding tax obligations, when cash amounts are distributed back to the U.S.

Our liquidity requirements include interest payments related to our debt structure. As reported, our cash interest paid for the three months ended March 31, 2023 and 2022 was approximately $15.2 million and $8.4 million, respectively. Before any impact of hedges, a one percent change in assumed interest rates for our variable interest credit facilities would have an annual impact of approximately $8.8 million on interest expense.

We hedge the interest rate fluctuations on debt obligations through interest rate cap agreements. As of March 31, 2023, we had a $400.0 million of notional variable-rate debt with a cap rate of 1.00% through August 2023, a $250.0 million of notional variable-rate debt with a cap rate of 1.00% through October 2024, a $250.0 million of notional variable-rate debt with a cap rate of 1.00% through October 2025, a $150.0 million of notional variable-rate debt with a cap rate of 1.00% through July 2026, a $200.0 million of notional variable-rate debt with a cap rate of 1.00% through October 2025, and a $450.0 million of notional variable-rate debt with a cap rate of 1.00% through October 2026.

The Company's off-balance sheet arrangements include $4.1 million of outstanding letters of credit on our ABL Facility as of March 31, 2023.

Cash Flow

	Three months ended March 31,	
	2023	2022
	(in millions)	
Net cash provided by (used in):		
Operating activities	$ 4.1	$ 6.4
Investing activities	(18.7)	(14.4)
Financing activities	(33.6)	(2.6)
Effect of exchange rate changes on cash and cash equivalents	(1.1)	(0.6)
Net change in cash and cash equivalents	(49.3)	(11.2)
Cash and cash equivalents at beginning of period	110.9	140.9
Cash and cash equivalents at end of period	$ 61.6	$ 129.7

	Three months ended March 31,	
	2023	2022
	(in millions)	
Net income	$ (1.5)	$ 7.9
Non-cash and non-working capital related activities[1]	28.2	46.6
Changes in working capital	(18.6)	(40.7)
Other operating activities	(4.0)	(7.4)
Net cash provided by operating activities	$ 4.1	$ 6.4

(1) Includes depreciation, amortization, amortization of deferred financing costs and original issue discount, foreign currency exchange (gain) loss, deferred income tax provision (benefit), net (gain) loss on asset disposals, stock compensation expense, equity in net income and dividends received from affiliated companies.

	Three months ended March 31,	
	2023	2022
	(in millions)	
Working capital changes that (used) provided cash:		
Receivables	$ 8.4	$ (10.4)
Inventories	(1.3)	(1.0)
Prepaids and other current assets	(9.7)	(3.6)
Accounts payable	(1.9)	2.2
Accrued liabilities	(14.1)	(27.9)
	$ (18.6)	$ (40.7)

	Three months ended March 31,	
	2023	2022
	(in millions)	
Purchases of property, plant and equipment	$ (18.7)	$ (10.8)
Payments for business divestiture, net of cash	—	(3.7)
Other, net	—	0.1
Net cash used in investing activities	$ (18.7)	$ (14.4)

	Three months ended March 31,	
	2023	2022
	(in millions)	
Cash repayments on debt obligations	$ (2.3)	$ (2.3)
Repurchases of common shares	(29.9)	—
Tax withholdings on equity award vesting	(0.9)	(0.3)
Repayment of financing obligation	(0.7)	—
Other	0.2	—
Net cash used in financing activities	$ (33.6)	$ (2.6)

Net cash provided by operating activities was $4.1 million for the three months ended March 31, 2023, compared to $6.4 million provided for the three months ended March 31, 2022. Cash generated by operating activities, other than changes in working capital, was lower during the three months ended March 31, 2023 by $24.4 million compared to the same period in the prior year. The change in working capital during the three months ended March 31, 2023 was favorable compared to the three months ended March 31, 2022. Cash used to fund working capital was $18.6 million and $40.7 million for the three months ended March 31, 2023 and 2022, respectively.

The decrease in cash generated by operating activities, other than changes in working capital, was lower by $24.4 million as compared to the prior year period primarily due to an decrease in operating profit and a decrease in dividends received from affiliated companies.

The increase in cash from working capital of $22.1 million as compared to the prior year was primarily due to favorable changes in accounts receivable and accrued liabilities, which was partially offset by unfavorable changes in prepaids and other current assets and accounts payable.

The favorable change in accounts receivable was driven by the timing of sales as well as decreased sales volume. The favorable change in accrued liabilities mainly relates to higher income tax payments in the prior year period as compared to the current year period. The unfavorable change in prepaid and other current assets primarily relates to the timing of non-trade receivables from related parties. The unfavorable change in accounts payable is due to the timing of vendor payments and professional fees.

Net cash used in investing activities was $18.7 million for the three months ended March 31, 2023, compared to net cash used of $14.4 million during the same period in 2022. Cash used in investing activities consisted of $18.7 million and $10.8 million to fund capital expenditures during the three months ended March 31, 2023 and 2022, respectively. During the three months ended March 31, 2022, we made an additional payment of $3.7 million related to our divestiture of our Performance Chemicals business representing the final adjustments to the sale price.

Net cash used in financing activities was $33.6 million for the three months ended March 31, 2023, compared to net cash used of $2.6 million during the same period in 2022. Net cash used in financing activities was primarily driven by the Company repurchases of common stock of $29.9 million during the three months ended March 31, 2023.

Debt

	March 31, 2023	December 31, 2022
	(in millions)	
Senior Secured Term Loan Facility due June 2028	$ 884.3	$ 886.5
ABL Facility	—	—
Total debt	884.3	886.5
Original issue discount	(7.2)	(7.5)
Deferred financing costs	(4.0)	(4.1)
Total debt, net of original issue discount and deferred financing costs	873.1	874.9
Less: current portion	(9.0)	(9.0)
Total long-term debt, excluding current portion	$ 864.1	$ 865.9

As of March 31, 2023, our total debt was $884.3 million, excluding the original issue discount of $7.2 million and deferred financing costs of $4.0 million for our senior secured credit facilities. Our net debt as of March 31, 2023 was $822.7 million, including cash and cash equivalents of $61.6 million. We may seek, subject to market conditions and other factors, opportunities to repurchase, refinance or otherwise reprice our debt.

Capital Expenditures

Maintenance capital expenditures include spending on maintenance of business, health, safety and environmental initiatives. Growth capital expenditures include spending to drive organic sales growth and cost savings initiatives. These capital expenditures represent our "book" capital expenditures for which the company has recorded, but not necessarily paid for the capital expenditures.

	Three months ended March 31,	
	2023	2022
	(in millions)	
Maintenance capital expenditures	$ 12.8	$ 7.0
Growth capital expenditures	1.3	2.1
Total capital expenditures	$ 14.1	$ 9.1

Capital expenditures remained at a level sufficient for required maintenance and certain expansion growth initiatives during these periods. Maintenance capital expenditures were higher in the three months ended March 31, 2023 compared to the three months ended March 31, 2022 due to higher turnaround expenditures and additional expenditures incurred related to Winter Storm Elliott impacting our manufacturing facilities. Growth capital expenditures were slightly lower in the three months ended March 31, 2023 compared to the three months ended March 31, 2022 due to the completion of several expansion projects in 2022.

Critical Accounting Policies and Estimates

We prepare our condensed consolidated financial statements in conformity with GAAP and our significant accounting policies are described in Note 2 to our audited consolidated financial statements included in our Annual Report on Form 10-K. The preparation of financial statements in conformity with GAAP requires us to make estimates and assumptions that affect reported amounts and related disclosures. We base our estimates and judgments on historical experience and other relevant factors that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We evaluate our critical accounting estimates, assumptions and judgments on an ongoing basis.

There has been no material change in our critical accounting policies and use of estimates from those described in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," included in our Annual Report on Form 10-K.

Accounting Standards Not Yet Adopted

See Note 2 to our unaudited condensed consolidated financial statements for a discussion of recently issued accounting standards and their effect on us.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Our major market risk exposure is potential losses arising from changing rates and prices regarding foreign currency exchange rate risk, interest rate risk and credit risk. The audit committee of our board of directors regularly reviews foreign exchange and interest rate activity, and monitors compliance with our hedging policy. We do not use financial instruments for speculative purposes, and we limit our hedging activity to the underlying economic exposure.

There have been no material changes in the foreign currency exchange rate risk, interest rate risk or credit risk discussed in Item 7A., "Quantitative and Qualitative Disclosures about Market Risk," included in our Annual Report on Form 10-K.

ITEM 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of March 31, 2023, the end of the period covered by this Quarterly Report on Form 10-Q.

The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended ("Exchange Act"), means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the 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. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. Management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of such date, our disclosure controls and procedures were effective at a reasonable assurance level.

Changes in Internal Control Over Financial Reporting

No changes in our internal control over financial reporting occurred during the quarter ended March 31, 2023 that materially affected, or which are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

From time to time, we may be subject to various legal claims and proceedings incidental to the normal conduct of business, relating to such matters as personal injury, product liability and warranty claims, waste disposal practices, release of chemicals into the environment and other matters that may arise in the ordinary course of our business. We currently believe that there is no litigation pending that is likely to have a material adverse effect on our business. Regardless of the outcome, legal proceedings can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

ITEM 1A. RISK FACTORS.

"Item 1A, Risk Factors" in our Annual Report on Form 10-K includes a discussion of our risk factors. The information presented below updates, and should be read in conjunction with, the risk factors disclosed in our Annual Report on Form 10-K. The effects of the events and circumstances described in the following risk factors may have additional effect of heightening many of the risks noted in our Annual Report on Form 10-K. Except as presented below, there have been no material changes from the risk factors described in our Annual Report on Form 10-K.

INEOS continues to have significant influence over us, which could limit your ability to influence the outcome of key transactions, including a change of control.

As of March 31, 2023, INEOS Limited, a privately owned corporation ("INEOS") beneficially owns approximately 24,731,385 shares of our common stock, which represents approximately 21% of our outstanding common stock. For as long as INEOS continues to beneficially own a substantial percentage of the voting power of our outstanding common stock, it will continue to have significant influence over us. For example, INEOS will be able to strongly influence the election of all of the members of our board of directors and our business and affairs, including any determinations with respect to mergers or other business combinations, the acquisition or disposition of assets, the incurrence of additional indebtedness, the issuance of any additional shares of common stock or other equity securities, the repurchase or redemption of shares of our common stock and the payment of dividends.

Additionally, INEOS is in the business of making investments in companies and may acquire and hold interests in businesses that compete directly or indirectly with us. INEOS may also pursue acquisition opportunities that may be complementary to our business, and, as a result, those acquisition opportunities may not be available to us.

There may be sales of a substantial amount of our common stock by our current stockholders, and these sales could cause the price of our common stock to fall.

As of March 31, 2023, there were 120,124,260 shares of our common stock outstanding. Approximately 24,731,385 shares of our outstanding common stock is held by INEOS.

Sales of substantial amounts of our common stock in the public market, or the perception that such sales will occur, could adversely affect the market price of our common stock and make it difficult for us to raise funds through securities offerings in the future.

In addition, we have registered shares of our common stock that are reserved for issuance under our 2016 Stock Incentive Plan and 2017 Omnibus Incentive Plan, as amended and restated.

Provisions in our charter documents and Delaware law may deter takeover efforts that may be beneficial to stockholder value.

In addition to INEOS's beneficial ownership of a substantial percentage of our common stock, provisions in our certificate of incorporation and bylaws and Delaware law could make it harder for a third party to acquire us, even if doing so might be beneficial to our stockholders. These provisions include a classified board of directors and the ability of our board of directors to issue preferred stock without stockholder approval that could be used to dilute a potential hostile acquiror. Our certificate of incorporation imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock other than INEOS and investment funds affiliated with CCMP Capital Advisors, L.P. ("CCMP"), one of our former stockholders. As a result, you may lose your ability to sell your stock for a price in excess of the prevailing market price due to these protective measures, and efforts by stockholders to change the direction or management of the company may be unsuccessful.

Our certificate of incorporation contains a provision renouncing our interest and expectancy in certain corporate opportunities, which could adversely impact our business.

INEOS, and the member(s) of our board of directors who are affiliated with INEOS and our former stockholder CCMP, by the terms of our certificate of incorporation, are not required to offer us any corporate opportunity of which they become aware and can take any such corporate opportunity for themselves or offer it to other companies in which they have an investment. We, by the terms of our certificate of incorporation, expressly renounce any interest or expectancy in any such corporate opportunity to the extent permitted under applicable law, even if the opportunity is one that we or our subsidiaries might reasonably have pursued or had the ability or desire to pursue if granted the opportunity to do so. Our certificate of incorporation may not be amended to eliminate our renunciation of any such corporate opportunity arising prior to the date of any such amendment.

INEOS and CCMP are in the business of making investments in companies and may from time to time acquire and hold interests in businesses that compete directly or indirectly with us. These potential conflicts of interest could have a material adverse effect on our business, financial condition, results of operations or prospects if INEOS or CCMP allocate attractive corporate opportunities to themselves or their affiliates instead of to us.

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

The following table contains information about purchases of our common stock during the first quarter of 2023:

	Total Number of Shares of Common Stock Purchased		Average Price Paid per Share of Common Stock [1]		Total Number of Shares of Common Stock Purchased as Part of Publicly Announced Plan or Programs	Maximum Number (or Dollar Value) of Shares of Common Stock that May Yet Be Purchased Under the Plans or Programs (in thousands)
January 1, 2023—January 31, 2023	93,910	(2)	$ 9.07		N/A	N/A
February 1, 2023—February 28, 2023	—		$ —		N/A	N/A
March 1, 2023—March 31, 2023	3,001,359	(3)	$ 9.95	(4)	3,000,000	$ 283,448
Total	3,095,269					

(1) Excludes brokerage commissions and other costs of execution.

(2) Represents shares of common stock delivered to the Company by employees to satisfy income tax withholding obligations of the employees in connection with the vesting of restricted stock units.

(3) In April 2022, our Board of Directors approved and announced a new stock repurchase program authorizing the repurchase of up to $450 million of the Company's outstanding common stock over the next four years. This program is expected to be funded using cash on hand and cash generated from operations. We primarily expect to conduct the repurchase program through negotiated transactions with the Company's equity sponsors, as well as through open market repurchases or other means, including through Rule 10b-18 trading plans or through the use of other techniques such as accelerated share repurchases. The actual timing, number and nature of shares repurchased will depend on a variety of factors, including stock, price, trading volume, and general business and market conditions. The repurchase program does not obligate us to acquire any number of shares in any specific period or at all and may be amended, suspended or discontinued at any time at our discretion.

Includes 1,359 shares of common stock delivered to the Company by employees to satisfy income tax withholding obligations of the employees in connection with the vesting of performance stock units, and 3,000,000 shares of common stock that the Company repurchased from the underwriter pursuant to the stock repurchase program in connection with a secondary offering of the Company's common stock in March 2023 at a price of $9.95 per share for a total of $29.9 million. As of March 31, 2023, $283.4 million was available for additional share repurchases under the program.

(4) Represents the weighted average price paid per share of the common stock, which includes 1,359 shares of common stock at an average price per share of $10.72 that were delivered to the Company by employees to satisfy income tax withholding obligations of the employees in connection with the vesting of performance stock units, and 3,000,000 shares of the common stock that the Company repurchased from the underwriter in connection with a secondary offering of the Company's common stock at a price of $9.95 per share.

ITEM 6. EXHIBITS.

The following exhibits are being filed or furnished as part of this Quarterly Report on Form 10-Q:

Exhibit No.	Description
10.1	First Amendment Agreement, dated February 9, 2023 to the Term Loan Credit Agreement, dated June 9, 2021, by and among Ecovyst Catalyst Technologies LLC, Ecovyst Midco II Inc, Eco Services Operations Corp and Credit Suisse AG (incorporated by reference to Exhibit 10.27 to the Company's Annual Report on Form 10-K, filed on February 28, 2023)
10.2	Fourth Amendment, dated February 17, 2023 to the ABL Credit Agreement, dated May 4, 2016 by and among Ecovyst Catalyst Technologies LLC, Ecovyst Catalyst Technologies UK Limited, Ecovyst Midco II Inc. and Citibank, N.A. (incorporated by reference to Exhibit 10.28 to the Company's Annual Report on Form 10-K, filed on February 28, 2023)
31.1	Certification of Chief Executive Officer of Ecovyst Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	Certification of Chief Financial Officer of Ecovyst Inc. pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
32.1	Certification of Chief Executive Officer of Ecovyst Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer of Ecovyst Inc. pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
101	The following materials from the Quarterly Report on Form 10-Q of Ecovyst Inc. for the quarter ended March 31, 2023, formatted in Inline XBRL: (i) Condensed Consolidated Statements of Income, (ii) Condensed Consolidated Statements of Comprehensive Income, (iii) Condensed Consolidated Balance Sheets, (iv) Condensed Consolidated Statements of Stockholders' Equity, (v) Condensed Consolidated Statements of Cash Flows, (vi) Notes to Condensed Consolidated Financial Statements and (vii) document and entity information, tagged as blocks of text and including detailed tags
104	The cover page from the Quarterly Report on Form 10-Q of Ecovyst Inc. for the quarter ended March 31, 2023, formatted in Inline XBRL and included as Exhibit 101

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.

Ecovyst Inc.

Date: May 5, 2023	By: /s/ MICHAEL FEEHAN
	Michael Feehan
	Vice President and Chief Financial Officer
	(Duly Authorized Officer and Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002

I, Kurt J. Bitting, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Ecovyst Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 5, 2023

/s/ KURT J. BITTING
Kurt J. Bitting
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE
SARBANES-OXLEY ACT OF 2002

I, Michael Feehan, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Ecovyst Inc.;

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

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

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

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

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

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

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

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

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

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

Date: May 5, 2023	/s/ MICHAEL FEEHAN
	Michael Feehan
	Vice President and Chief Financial Officer
	(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
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 Ecovyst Inc. (the “Company”) on Form 10-Q for the quarterly period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Kurt J. Bitting, 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, that to my knowledge:

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

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 5, 2023

/s/ KURT J. BITTING
Kurt J. Bitting
Chief Executive Officer
(Principal Executive Officer)

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
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 Ecovyst Inc. (the “Company”) on Form 10-Q for the quarterly period ended March 31, 2023 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Michael Feehan, Vice President and 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, that to my knowledge:

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

2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: May 5, 2023	/s/ MICHAEL FEEHAN
	Michael Feehan
	Vice President and Chief Financial Officer
	(Principal Financial Officer)