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 June 30, 2022

OR

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

For the transition period from to
Commission File 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 July 28, 2022 was 136,739,543.

Ecovyst Inc.

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June 30, 2022

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 June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Sales	$ 225,172	$ 146,952	$ 404,886	$ 273,576
Cost of goods sold	165,313	108,479	297,292	204,984
Gross profit	59,859	38,473	107,594	68,592
Selling, general and administrative expenses	22,783	21,856	46,319	43,986
Other operating expense, net	9,665	4,965	17,428	10,472
Operating income	27,411	11,652	43,847	14,134
Equity in net (income) from affiliated companies	(8,504)	(6,755)	(14,253)	(11,965)
Interest expense, net	8,888	8,741	17,338	19,197
Debt extinguishment costs	—	11,717	—	11,717
Other expense (income), net	485	(1,875)	625	3,299
Income (loss) from continuing operations before income taxes and noncontrolling interest	26,542	(176)	40,137	(8,114)
Provision for income taxes	7,297	7,694	13,017	2,504
Net income (loss) from continuing operations	19,245	(7,870)	27,120	(10,618)
Net income (loss) from discontinued operations, net of tax	—	6,520	—	(83,250)
Net income (loss)	19,245	(1,350)	27,120	(93,868)
Less: Net income attributable to the noncontrolling interest—discontinued operations	—	140	—	257
Net income (loss) attributable to Ecovyst Inc.	$ 19,245	$ (1,490)	$ 27,120	$ (94,125)
Income (loss) from continuing operations attributable to Ecovyst Inc.	$ 19,245	$ (7,870)	$ 27,120	$ (10,618)
Income (loss) from discontinued operations attributable to Ecovyst Inc.	—	6,380	—	(83,507)
Net income (loss) attributable to Ecovyst Inc.	$ 19,245	$ (1,490)	$ 27,120	$ (94,125)
Net income (loss) per share:				
Basic income (loss) per share—continuing operations	$ 0.14	$ (0.06)	$ 0.20	$ (0.08)
Diluted income (loss) per share—continuing operations	$ 0.14	$ (0.06)	$ 0.19	$ (0.08)
Basic loss per share—discontinued operations	$ —	$ 0.05	$ —	$ (0.61)
Diluted loss per share—discontinued operations	$ —	$ 0.05	$ —	$ (0.61)
Basic income (loss) per share	$ 0.14	$ (0.01)	$ 0.20	$ (0.69)
Diluted income (loss) per share	$ 0.14	$ (0.01)	$ 0.19	$ (0.69)
Weighted average shares outstanding:				
Basic	138,035,764	136,095,060	137,876,185	136,072,165
Diluted	139,149,560	136,095,060	139,175,659	136,072,165

See accompanying notes to condensed consolidated financial statements.

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

	Three months ended June 30,		Six months ended June 30,	
	2022	**2021**	**2022**	**2021**
Net income (loss)	$ 19,245	$ (1,350)	$ 27,120	$ (93,868)
Other comprehensive income (loss), net of tax:				
Pension and postretirement benefits	(39)	(42)	(78)	(85)
Net gain from hedging activities	4,757	413	18,479	1,178
Foreign currency translation	(7,994)	12,163	(10,299)	8,302
Total other comprehensive (loss) income	(3,276)	12,534	8,102	9,395
Comprehensive income (loss)	15,969	11,184	35,222	(84,473)
Less: Comprehensive income attributable to noncontrolling interests	—	593	—	316
Comprehensive income (loss) attributable to Ecovyst Inc.	$ 15,969	$ 10,591	$ 35,222	$ (84,789)

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)

	June 30, 2022	December 31, 2021
ASSETS		
Cash and cash equivalents	$ 151,228	$ 140,889
Accounts receivable, net	113,177	80,802
Inventories, net	56,214	53,813
Prepaid and other current assets	35,953	16,165
Total current assets	356,572	291,669
Investments in affiliated companies	426,337	446,074
Property, plant and equipment, net	583,636	596,231
Goodwill	403,211	406,139
Other intangible assets, net	136,967	145,617
Right-of-use lease assets	30,039	30,115
Other long-term assets	31,023	15,374
Total assets	$ 1,967,785	$ 1,931,219
LIABILITIES		
Current maturities of long-term debt	$ 9,000	$ 9,000
Accounts payable	57,938	51,860
Operating lease liabilities—current	8,374	8,306
Accrued liabilities	58,836	75,915
Total current liabilities	134,148	145,081
Long-term debt, excluding current portion	869,341	872,839
Deferred income taxes	144,114	126,749
Operating lease liabilities—noncurrent	21,528	21,719
Other long-term liabilities	20,470	24,094
Total liabilities	1,189,601	1,190,482
Commitments and contingencies (Note 17)		
EQUITY		
Common stock ($0.01 par); authorized shares 450,000,000; issued shares 139,624,577 and 137,820,971 on June 30, 2022 and December 31, 2021, respectively; outstanding shares 137,817,183 and 136,938,758 on June 30, 2022 and December 31, 2021, respectively	1,396	1,378
Preferred stock ($0.01 par); authorized shares 50,000,000; no shares issued or outstanding on June 30, 2022 and December 31, 2021	—	—
Additional paid-in capital	1,084,790	1,073,409
Accumulated deficit	(288,587)	(315,707)
Treasury stock, at cost; shares 1,807,394 and 882,213 on June 30, 2022 and December 31, 2021, respectively	(21,725)	(12,551)
Accumulated other comprehensive income (loss)	2,310	(5,792)
Total equity	778,184	740,737
Total liabilities and equity	$ 1,967,785	$ 1,931,219

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 (loss)	Non-controlling interest	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
Net income	—	—	19,245	—	—	—	19,245
Other comprehensive loss	—	—	—	—	(3,276)	—	(3,276)
Repurchases of common shares	—	—	—	(8,842)	—	—	(8,842)
Stock compensation expense	—	5,409	—	—	—	—	5,409
Shares issued under equity incentive plan, net of forfeitures	—	17	—	—	—	—	17
Balance, June 30, 2022	$ 1,396	$ 1,084,790	$ (288,587)	$ (21,725)	$ 2,310	$ —	$ 778,184

	Common stock	Additional paid-in capital	(Accumulated deficit)	Treasury stock, at cost	Accumulated other comprehensive loss	Non-controlling interest	Total
Balance, December 31, 2020	$ 1,371	$ 1,477,859	$ (175,758)	$ (11,081)	$ (15,265)	$ 53	$ 1,277,179
Net (loss) income	—	—	(92,635)	—	—	117	(92,518)
Other comprehensive loss	—	—	—	—	(2,745)	(394)	(3,139)
Tax withholdings on equity award vesting	—	—	—	(1,470)	—	—	(1,470)
Distributions to noncontrolling interests	—	—	—	—	—	(516)	(516)
Stock compensation expense	—	6,877	—	—	—	—	6,877
Shares issued under equity incentive plan, net of forfeitures	7	63	—	—	—	—	70
Balance, March 31, 2021	$ 1,378	$ 1,484,799	$ (268,393)	$ (12,551)	$ (18,010)	$ (740)	$ 1,186,483
Net (loss) income	—	—	(1,490)	—	—	140	(1,350)
Other comprehensive income	—	—	—	—	12,081	453	12,534
Distributions to noncontrolling interests	—	—	—	—	—	(593)	(593)
Stock compensation expense	—	7,499	—	—	—	—	7,499
Shares issued under equity incentive plan, net of forfeitures	—	36	—	—	—	—	36
Balance, June 30, 2021	$ 1,378	$ 1,492,334	$ (269,883)	$ (12,551)	$ (5,929)	$ (740)	$ 1,204,609

See accompanying notes to condensed consolidated financial statements.

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

	Six months ended June 30,	
	2022	**2021**
Cash flows from operating activities:		
Net income (loss)	$ 27,120	$ (93,868)
Net loss from discontinued operations	—	83,250
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation	32,153	33,533
Amortization	7,051	5,952
Amortization of deferred financing costs and original issue discount	1,002	730
Debt extinguishment costs	—	5,981
Foreign currency exchange loss	1,148	3,882
Pension and postretirement healthcare benefit	(1,106)	(1,190)
Deferred income tax provision	11,285	4,279
Net loss on asset disposals	706	2,379
Stock compensation	12,679	12,644
Equity in net income from affiliated companies	(14,253)	(11,965)
Dividends received from affiliated companies	30,000	10,000
Other, net	(3,258)	(3,270)
Working capital changes that provided (used) cash, excluding the effect of acquisitions and dispositions:		
Receivables	(33,152)	(18,376)
Inventories	(3,091)	5,501
Prepaids and other current assets	(47)	(1,756)
Accounts payable	9,671	2,619
Accrued liabilities	(25,053)	(3,104)
Net cash provided by operating activities, continuing operations	52,855	37,221
Net cash provided by operating activities, discontinued operations	—	12,077
Net cash provided by operating activities	52,855	49,298
Cash flows from investing activities:		
Purchases of property, plant and equipment	(25,835)	(28,039)
Payments for business divestiture	(3,744)	—
Business combinations, net of cash acquired	—	(41,994)
Other, net	81	—
Net cash used in investing activities, continuing operations	(29,498)	(70,033)
Net cash used in investing activities, discontinued operations	—	(32,010)
Net cash used in investing activities	(29,498)	(102,043)
Cash flows from financing activities:		
Issuance of long-term debt, net of discount	—	897,750
Debt issuance costs	—	(1,293)
Repayments of long-term debt	(4,500)	(900,000)
Repurchases of common shares	(7,127)	—
Tax withholdings on equity award vesting	(332)	(1,470)
Other, net	45	6
Net cash used in financing activities, continuing operations	(11,914)	(5,007)
Net cash used in financing activities, discontinued operations	—	(1,117)
Net cash used in financing activities	(11,914)	(6,124)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(1,104)	(3,339)
Net change in cash, cash equivalents and restricted cash	10,339	(62,208)
Cash, cash equivalents and restricted cash at beginning of period	140,889	137,219
Cash, cash equivalents and restricted cash at end of period	$ 151,228	$ 75,011
Less: cash, cash equivalents, and restricted cash of discontinued operations	—	(17,603)
Cash, cash equivalents and restricted cash at end of period of continuing operations	$ 151,228	$ 57,408

For supplemental cash flow disclosures, see Note 21.

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.

On December 14, 2020, the Company completed the sale of its Performance Materials business for $650,000, and on August 1, 2021, the Company completed the sale of its Performance Chemicals business. The financial results of these businesses are presented as discontinued operations in the condensed consolidated financial statements for the 2021 period presented. See Note 3 for more information on these transactions.

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.

The notes to the condensed consolidated financial statements, unless otherwise indicated, are on a continuing operations basis.

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, 2021.

2. New Accounting Standards:

Recently Adopted Accounting Standards

In November 2021, the FASB issued guidance that requires entities to provide certain disclosures when they (1) have received government assistance and (2) use a grant or contribution accounting model by analogy to other accounting guidance. Previously, there was no guidance under GAAP on recognizing or measuring government grants to business entities. The new guidance does not provide any additional guidance on this topic; rather, it only provides guidance on required disclosures for business entities that receive government assistance and apply another grant or contribution accounting framework by analogy. The new guidance is effective for fiscal years beginning after December 15, 2021 with the new disclosures required on an annual basis, and can be applied either prospectively or retrospectively. The Company adopted the new guidance on January 1, 2022 and will include the disclosures as required in its annual reporting with respect to any government assistance or grants subject to the scope of the guidance to the extent material.

Accounting Standards Not Yet Adopted

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 is currently evaluating the impact of the new guidance, which would only be applied prospectively to business combinations upon the adoption of the guidance.

In March 2020 and January 2021, the 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. 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. During the year ended December 31, 2021, the FASB extended the guidance adoption date to June 30, 2023. The Company continues to evaluate the impact of the guidance and may apply other elections as applicable as additional changes in the market occur.

3. Divestitures:

Performance Materials Divestiture

Upon the close of the Performance Materials divestiture transaction on December 14, 2020, the Company entered into a Transition Services Agreement with the buyer pursuant to which the buyer received certain services to provide for the orderly transition of various functions and processes after the closing of the transaction. The services under the Transition Services Agreement included information technology, accounting, tax, financial services, human resources, facilities, and other administrative support services. These services were provided for a period of nine months, with three 30-day extensions available. The Company billed $1,401 and $3,061 under the Transition Services Agreement to the buyer during the three and six months ended June 30, 2021. Those billings were included in selling, general and administrative expenses on the condensed consolidated financial statements for the six months ended June 30, 2021.

During the three months ended June 30, 2021, the Company incurred transaction costs of $84 and stock-based compensation expense of $630, and an associated tax benefit of $192 related to the Performance Materials divestiture, which was included in loss from discontinued operations, net of tax. During the six months ended June 30, 2021, the Company incurred transaction costs of $1,530 and stock-based compensation expense of $1,283, and an associated tax benefit of $706 related to the Performance Materials divestiture, which was included in loss from discontinued operations, net of tax.

Performance Chemicals Divestiture

On February 28, 2021, the Company entered into a definitive agreement to sell its Performance Chemicals business to Sparta Aggregator L.P. (the "Buyer"), a partnership established by Koch Minerals & Trading, LLC and Cerberus Capital Management, L.P., for $1,100,000, subject to certain adjustments including indebtedness, cash, working capital and transaction expenses. The Company completed the sale of the Performance Chemicals business on August 1, 2021. During the year ended December 31, 2021, the net cash proceeds to the Company from the sale were $978,449 after certain customary adjustments for indebtedness, working capital and cash at the closing of the transaction. During the six months ended June 30, 2022, the Company made a payment to the buyer for $3,744, representing the final adjustments to the sale price. The Company classified the payment within net cash used in investing activities – continuing operations in the condensed consolidated statements of cash flows.

Prior to the close of the transaction, the disposal group was tested for recoverability at each of the balance sheet dates subsequent to meeting the discontinued operations criteria, and the Company recognized an estimated disposal loss of $13,990 and $109,584 during the three and six months ended June 30, 2021, respectively, which was included in net loss from discontinued operations, net of tax on the condensed consolidated statement of income. In the condensed consolidated balance sheet as of June 30, 2021, the Company recorded the disposal loss to goodwill and a valuation allowance of approximately $75,080 and $34,504, respectively, which was included in long-term assets held for sale.

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

The following table summarizes the results of discontinued operations related to the Performance Chemicals business for the three and six months ended June 30, 2021:

	Three months ended June 30, 2021	Six months ended June 30, 2021
Sales	$ 170,374	$ 334,897
Cost of goods sold	118,785	244,638
Selling, general and administrative expenses	11,490	23,206
Goodwill impairment charge	—	75,080
Other operating expense, net	11,850	29,330
Loss on sale of the Performance Chemicals business	13,990	34,504
Operating income (loss)	14,259	(71,861)
Equity in net (income) from affiliated companies	(48)	(86)
Interest expense, net [1]	5,599	8,814
Other income, net	(840)	(6,363)
Income (loss) from discontinued operations before income tax	9,548	(74,226)
Provision for income taxes	2,507	6,918
Income (loss) from discontinued operations, net of tax	$ 7,041	$ (81,144)

(1) Upon the close of the transaction, the Company used a portion of the net proceeds to repay a portion of its outstanding debt amounting to $526,363. Prior to the Company's debt refinancing in June 2021, the Company's outstanding term loan facilities had mandatory repayment provisions. As a result, interest expense has been allocated to discontinued operations on the basis of the Company's total repayment of $526,363.

Net income attributable to the noncontrolling interest related to the Performance Chemicals business, net of tax was $140 and $257 for the three and six months ended June 30, 2021. Net income (loss) attributable to Ecovyst Inc., related to the Performance Chemicals business, net of tax was $6,901 and $(81,401) for the three and six months ended June 30, 2021.

4. 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 18 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
Industrial & process chemicals	• Sulfur derivatives for industrial production
	• Treatment services
Fuels & emission control	• Refining hydrocracking catalysts
	• Emission control catalysts
	• Regeneration services for alkylate production
Packaging & engineered plastics	• Catalysts for high-density polyethylene and chemicals syntheses
	• Antiblocks for film packaging
	• Sulfur derivatives for nylon production
Natural resources	• Sulfur derivatives for mining

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

The following tables disaggregate the Company's sales, by segment and end use, for the three and six months ended June 30, 2022 and 2021:

	Three months ended June 30, 2022		
	Ecoservices	Catalyst Technologies[(2)]	Total
Industrial & process chemicals	$ 42,141	$ —	$ 42,141
Fuels & emission control[(1)]	83,178	—	83,178
Packaging & engineered plastics	33,615	32,204	65,819
Natural resources	34,034	—	34,034
Total segment sales	$ 192,968	$ 32,204	$ 225,172

	Three months ended June 30, 2021		
	Ecoservices	Catalyst Technologies[(2)]	Total
Industrial & process chemicals	$ 18,341	$ —	$ 18,341
Fuels & emission control[(1)]	68,794	—	68,794
Packaging & engineered plastics	14,979	26,215	41,194
Natural resources	18,627	—	18,627
Total segment sales	$ 120,741	$ 26,215	$ 146,956
Eliminations	(4)	—	(4)
Total	$ 120,737	$ 26,215	$ 146,952

	Six months ended June 30, 2022		
	Ecoservices	Catalyst Technologies[(2)]	Total
Industrial & process chemicals	$ 74,995	$ —	$ 74,995
Fuels & emission control[(1)]	154,836	—	154,836
Packaging & engineered plastics	58,093	57,858	115,951
Natural resources	59,104	—	59,104
Total segment sales	$ 347,028	$ 57,858	$ 404,886

	Six months ended June 30, 2021		
	Ecoservices	Catalyst Technologies[(2)]	Total
Industrial & process chemicals	$ 35,288	$ —	$ 35,288
Fuels & emission control[(1)]	123,987	—	123,987
Packaging & engineered plastics	25,600	52,617	78,217
Natural resources	36,088	—	36,088
Total segment sales	$ 220,963	$ 52,617	$ 273,580
Eliminations	(4)	—	(4)
Total segment sales	$ 220,959	$ 52,617	$ 273,576

(1) As described in Note 1, the Company experiences seasonal sales fluctuations to customers in the fuels & emission control end use.
(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 11 to these condensed consolidated financial statements for further information).

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

5. 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 table presents information about the Company's assets and liabilities that were measured at fair value on a recurring basis as of June 30, 2022 and December 31, 2021, and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value.

	June 30, 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 14)	$ 23,849	$ —	$ 23,849	$ —
Derivative liabilities:				
Interest rate caps (Note 14)	$ 16	$ —	$ 16	$ —

	December 31, 2021	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Derivative assets:				
Interest rate caps (Note 14)	$ 1,080	$ —	$ 1,080	$ —
Derivative liabilities:				
Interest rate caps (Note 14)	$ 1,288	$ —	$ 1,288	$ —

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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 June 30, 2022, 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.

6. Stockholders' Equity:

Accumulated Other Comprehensive Income (Loss)

The following tables present the tax effects of each component of other comprehensive income (loss) for the three and six months ended June 30, 2022 and 2021:

	Three months ended June 30,					
	2022			2021		
	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 gains	$ —	$ —	$ —	$ 2	$ (1)	$ 1
Amortization of prior service cost	(52)	13	(39)	(58)	15	(43)
Benefit plans, net	(52)	13	(39)	(56)	14	(42)
Net gain from hedging activities	6,343	(1,586)	4,757	551	(138)	413
Foreign currency translation[(1)]	(7,994)	—	(7,994)	12,163	—	12,163
Other comprehensive income	$ (1,703)	$ (1,573)	$ (3,276)	$ 12,658	$ (124)	$ 12,534

	Six months ended June 30,					
	2022			2021		
	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 gains	$ 1	$ —	$ 1	$ 3	$ (1)	$ 2
Amortization of prior service cost	(105)	26	(79)	(116)	29	(87)
Benefit plans, net	(104)	26	(78)	(113)	28	(85)
Net gain from hedging activities	24,639	(6,160)	18,479	1,571	(393)	1,178
Foreign currency translation[(1)]	(10,299)	—	(10,299)	5,855	2,447	8,302
Other comprehensive income (loss)	$ 14,236	$ (6,134)	$ 8,102	$ 7,313	$ 2,082	$ 9,395

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(1) The income tax benefit or expense included in other comprehensive income is attributed to the portion of foreign currency translation associated with the Company's cross-currency interest rate swaps for the six months ended June 30, 2021, for which the tax effect is based on the applicable U.S. deferred income tax rate. See Note 14 to these condensed consolidated financial statements for information regarding the Company's cross-currency interest rate swaps, which were settled in March 2021.

The following table presents the changes in accumulated other comprehensive income (loss), net of tax, by component for the six months ended June 30, 2022 and 2021:

	Defined benefit and other postretirement plans	Net gain (loss) from hedging activities	Foreign currency translation	Total
December 31, 2021	$ 11,072	$ 2,254	$ (19,118)	$ (5,792)
Other comprehensive income (loss) before reclassifications	(155)	18,029	(10,299)	7,575
Amounts reclassified from accumulated other comprehensive income[1]	77	450	—	527
June 30, 2022	$ 10,994	$ 20,733	$ (29,417)	$ 2,310
December 31, 2020	$ 5,278	$ (660)	$ (19,883)	$ (15,265)
Other comprehensive income (loss) before reclassifications	(170)	1,043	8,243	9,116
Amounts reclassified from accumulated other comprehensive income[1]	85	135	—	220
June 30, 2021	$ 5,193	$ 518	$ (11,640)	$ (5,929)

(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 and six months ended June 30, 2022 and 2021:

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 June 30,		Six months ended June 30,		
	2022	2021	2022	2021	
Amortization of defined benefit and other postretirement items:					
Prior service (cost) credit	$ (53)	$ (58)	$ (105)	$ (116)	Other income (expense)[2]
Actuarial gains (losses)	1	2	2	3	Other income (expense)[2]
	(52)	(56)	(103)	(113)	Total before tax
	13	15	26	28	Tax benefit (expense)
	$ (39)	$ (41)	$ (77)	$ (85)	Net of tax
Gains and losses on cash flow hedges:					
Interest rate caps	$ (359)	$ (70)	$ (598)	$ (179)	Interest expense
	88	17	148	44	Tax benefit
	$ (271)	$ (53)	$ (450)	$ (135)	Net of tax
Total reclassifications for the period	$ (310)	$ (94)	$ (527)	$ (220)	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 16 to these condensed consolidated financial statements for additional details).

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Treasury Stock Repurchases

The Company records repurchases of its common stock for treasury at cost. Upon the reissuance of the Company's common stock from treasury, differences between the proceeds from reissuance and the average cost of the treasury stock are credited or charged to capital in excess of par value to the extent of prior credits related to the reissuance of treasury stock. If no such credits exist, the differences are charged to retained earnings.

2020 Stock Repurchase Program

On March 12, 2020, the Company's Board of Directors (the "Board") approved a plan to purchase up to $50,000 of the Company's common stock under a stock repurchase program approved by the Board. Under the plan, the Company could 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 determined the timing and the amount of any repurchases based on its evaluation of market conditions, share price and other factors. The stock repurchase program expired in March 2022, with no repurchases made in 2022 through the expiration of the program, nor during the three or six months ended June 30, 2021.

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 next four years. 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 and six months ended June 30, 2022, the Company repurchased 893,123 shares on the open market at an average price of $9.88, for a total of $8,842 (of which $1,715 was accrued at June 30, 2022). As of June 30, 2022, $441,158 was available for additional share repurchases under the program.

In July 2022, the Company repurchased 1,077,640 shares on the open market at an average price of $9.77, for a total of $10,553 as part of the approved stock repurchase program, which reduced availability for additional share repurchases under the program to $430,605.

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 no shares delivered to the Company to cover tax payments for the three months ended June 30, 2022 and 2021, and the fair value of the shares withheld to cover tax payments were $332 and $1,470 for the six months ended June 30, 2022 and 2021, respectively.

7. Acquisition:

On March 1, 2021 (the "Closing Date"), the Company completed the acquisition of Chem32, LLC ("Chem32") as part of a stock transaction (the "Acquisition") for $44,000 in cash. Based in Orange, Texas, Chem32 is a leader in ex situ pre-sulfiding and pre-activation for hydro-processing catalysts. The net cash paid on the Closing Date by the Company was $41,994, after certain customary adjustments for indebtedness, working capital, cash and a holdback amount pursuant to the agreement. A portion of the holdback was settled in July 2021 for a payment of $645, with $1,000 of the holdback remaining as of June 30, 2022.

Chem32 is reported as part of the Ecoservices segment. The Company believes that the Acquisition will offer a more robust portfolio of services within the refining industry by leveraging the Company's existing relationships, therefore contributing to a total purchase price that resulted in the recognition of $14,778 of goodwill, which was deductible for tax purposes. During the six months ended June 30, 2022, the Company recorded an immaterial adjustment between goodwill and deferred tax liabilities related to the final tax purchase price allocation. See Note 8 to these condensed consolidated financial statements for further information.

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The following table sets forth the calculation of the purchase price to the identifiable net assets acquired with respect to the Acquisition, which was complete as of December 31, 2021:

	Purchase Price Allocation
Cash paid, net of cash acquired	$ 42,639
Holdback	1,000
Total consideration, net of cash acquired	$ 43,639
Recognized amounts of identifiable assets acquired and liabilities assumed:	
Receivables	$ 1,368
Inventories	204
Prepaid and other current assets	351
Property, plant and equipment	5,046
Other intangible assets	22,100
Other long-term assets	187
Fair value of assets acquired	29,256
Accounts payable	207
Accrued liabilities	188
Fair value of net identifiable assets acquired	28,861
Goodwill	14,778
	$ 43,639

In accordance with the requirements of the purchase method of accounting for acquisitions, accounts receivable and inventories were recorded at fair market value. As of the Closing Date, the fair value of accounts receivable approximated historical cost. The gross contractual amount of accounts receivable at the Closing Date was $1,368, of which there was no amount deemed uncollectible. Fair value of inventory is defined as estimated selling prices less the sum of (a) costs of disposal and (b) a reasonable profit allowance for the selling effort of the acquiring entity, which the Company determined acquired cost equaled fair value of the inventory acquired.

The valuation of intangibles assets acquired and the related weighted-average amortization periods were as follows:

	Amount	Weighted-Average Expected Useful Life (in years)
Intangible assets subject to amortization:		
Customer relationships	$ 16,000	10
Technical know-how	3,800	10
Contracts	700	5
Trade names	1,600	10
Total intangible assets subject to amortization	$ 22,100	

Net sales and net income attributable to Chem32 during the period from the Closing Date through June 30, 2021 were immaterial. Pro forma financial information has not been presented as it is immaterial for the three and six months ended June 30, 2021. Acquisition and integration costs was immaterial for the six months ended June 30, 2021 and are included in other operating expense, net in the Company’s consolidated statement of income.

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8. Goodwill:

The change in the carrying amount of goodwill for the six months ended June 30, 2022 is summarized as follows:

	Ecoservices	Catalyst Technologies	Total
Balance as of December 31, 2021	$ 326,670	$ 79,469	$ 406,139
Goodwill adjustments[1]	(81)	—	(81)
Foreign exchange impact	—	(2,847)	(2,847)
Balance as of June 30, 2022	$ 326,589	$ 76,622	$ 403,211

(1) During the six months ended June 30, 2022, the Company recorded an adjustment of $81 between goodwill and deferred tax liabilities related to the final tax purchase price allocation for the Chem32 acquisition.

9. Other Operating Expense, Net:

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

	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Amortization expense	$ 2,644	$ 2,189	$ 5,299	$ 4,374
Transaction and other related costs	790	610	5,070	1,083
Restructuring, integration and business optimization costs[1]	4,746	71	5,099	2,330
Net loss on asset disposals	573	1,601	706	2,379
Other, net	912	494	1,254	306
	$ 9,665	$ 4,965	$ 17,428	$ 10,472

(1) During the three and six months ended June 30, 2022 and the six months ended June 30, 2021, the Company's results were impacted by costs associated with severance charges for certain executives and employees.

10. Inventories, Net:

Inventories, net are classified and valued as follows:

	June 30, 2022	December 31, 2021
Finished products and work in process	$ 48,665	$ 46,894
Raw materials	7,549	6,919
	$ 56,214	$ 53,813
Valued at lower of cost or market:		
LIFO basis	$ 24,075	$ 33,330
Valued at lower of cost and net realizable value:		
FIFO or average cost basis	32,139	20,483
	$ 56,214	$ 53,813

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11. 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 June 30, 2022 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 June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Sales	$ 84,663	$ 76,060	$ 151,346	$ 142,265
Gross profit	29,168	26,121	52,752	48,067
Operating income	19,476	16,987	34,112	31,161
Net income	20,210	16,751	34,908	30,487

(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 June 30, 2022 and December 31, 2021 includes net purchase accounting fair value adjustments of $234,218 and $237,419, 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 $3,201 of amortization expense related to purchase accounting fair value adjustments for the three and six months ended June 30, 2022, respectively. Consolidated equity in net income from affiliates is net of $1,620 and $3,278 of amortization expense related to purchase accounting fair value adjustments for the three and six months ended June 30, 2021, respectively.

12. Property, Plant and Equipment:

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

	June 30, 2022	December 31, 2021
Land	$ 96,665	$ 97,047
Buildings and improvements	80,418	77,851
Machinery and equipment	724,348	714,435
Construction in progress	51,837	45,952
	953,268	935,285
Less: accumulated depreciation	(369,632)	(339,054)
	$ 583,636	$ 596,231

Depreciation expense was $16,142 and $32,153 for the three and six months ended June 30, 2022, respectively. Depreciation expense was $17,529 and $33,533 for the three and six months ended June 30, 2021, respectively.

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13. Long-term Debt:

The summary of long-term debt is as follows:

	June 30, 2022	December 31, 2021
Senior Secured Term Loan Facility due June 2028	$ 891,000	$ 895,500
ABL Facility	—	—
Total debt	891,000	895,500
Original issue discount	(8,121)	(8,762)
Deferred financing costs	(4,538)	(4,899)
Total debt, net of original issue discount and deferred financing costs	878,341	881,839
Less: current portion	(9,000)	(9,000)
Total long-term debt, excluding current portion	$ 869,341	$ 872,839

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 June 30, 2022 and December 31, 2021, the fair value of the senior secured term loan facility was $850,905 and $894,381, respectively. The fair value is classified as Level 2 based upon the fair value hierarchy (see Note 5 to these condensed consolidated financial statements for further information on fair value measurements).

14. 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 cash flow. 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 consolidated balance sheet. 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 OCI, 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 interest rate cap agreements 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 these agreements 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 agreements to lower the cap rate to 0.84% and paid an additional $900 premium annuitized during the effective period. The term and notional amount remained unchanged, and the total cumulative annuitized premium on the $500,000 of notional variable-rate debt is $4,410. The cap rate in effect at June 30, 2022 was 0.84% associated with the $500,000 of notional variable-rate debt.

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In July 2020, the Company entered into additional interest rate cap agreements to mitigate interest rate volatility from August 2020 to August 2023, with a cap rate of 1.00% on $400,000 of notional variable-rate debt. The cap rate in effect at June 30, 2022 was 1.00% associated with the $400,000 of notional variable-rate debt. The total annuitized premium on the $400,000 of notional variable-rate debt is $137.

In August 2021, PQ Corporation novated $900,000 of its interest rate caps to Ecovyst Catalyst Technologies LLC. Other than the novation, there were no other changes to the interest rate caps.

In January 2022, the Company entered into two new forward starting interest rate cap agreements, with notional amounts of $250,000 each and with a cap rate of 1.00%. The term for one of these interest rate caps is August 2022 through October 2024 and the term for the other is September 2023 through October 2025. The total cumulative annuitized premium is $4,450.

Use of Derivative Financial Instruments to Manage Foreign Currency Risk. The Company is exposed to risks related to its net investments in foreign operations due to fluctuations in foreign currency exchange rates, particularly between the United States dollar and the Euro. In February 2018, the Company entered into multiple cross-currency interest rate swap arrangements with an aggregate notional amount of €280,000 to hedge this exposure on the net investments of certain of its Euro-denominated subsidiaries in its Performance Materials and Performance Chemicals businesses. The Company recorded these swap agreements at fair value as assets or liabilities in its consolidated balance sheet. As the derivatives are designated and qualify as net investment hedges, changes in the fair value of the swaps attributable to changes in the spot exchange rates are recognized in cumulative translation adjustment ("CTA") within OCI and are held there until the hedged net investments are sold or substantially liquidated. Upon such sale or liquidation, the amount recognized in CTA is reclassified to earnings and reported in the same line item as the gain or loss on the liquidation of the net investments. Changes in the fair value of the swaps attributable to the cross-currency basis spread are excluded from the assessment of hedge effectiveness and are recorded in current period earnings.

In March 2021, as a result of the divestitures of the Performance Materials and Performance Chemicals businesses, the Company settled its cross-currency swaps. At the date of settlement, the total notional value of the cross-currency swaps was $311,380. The Company paid $13,170 in cash to settle the swaps, which is included in net cash used in investing activities, discontinued operations in the Company's condensed consolidated statement of cash flows for the six months ended June 30, 2021, as the underlying subsidiary subject to the net investment hedging relationship is part of the Performance Chemicals business.

The fair values of derivative instruments held as of June 30, 2022 and December 31, 2021 are shown below:

	Balance sheet location	June 30, 2022	December 31, 2021
Derivative assets:			
Derivatives designated as cash flow hedges:			
Interest rate caps	Prepaid and other current assets	9,413	—
Interest rate caps	Other long-term assets	$ 14,436	$ 1,080
Total derivative assets		$ 23,849	$ 1,080
Derivative liabilities:			
Derivatives designated as cash flow hedges:			
Interest rate caps	Accrued liabilities	$ 16	$ 1,288
Total derivative liabilities		$ 16	$ 1,288

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The following tables show the effect of the Company's derivative instruments designated as cash flow hedges on AOCI for the three and six months ended June 30, 2022 and 2021:

		Three months ended June 30,			
		2022		2021	
	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	$ 5,985	$ (359)	$ 479	$ (70)

		Six months ended June 30,			
		2022		2021	
	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	$ 24,041	$ (598)	$ 1,391	$ (179)

The following tables show the effect of the Company's cash flow hedge accounting on the condensed consolidated statements of income for the three and six months ended June 30, 2022 and 2021:

	Three months ended June 30,			
	2022		2021	
	Cost of goods sold	Interest (expense) income	Cost of goods sold	Interest (expense) income
Total amounts of income and expense line items presented in the statement of income in which the effects of cash flow hedges are recorded	$ (165,313)	$ (8,888)	$ (108,479)	$ (8,741)
Interest contracts:				
Amount of gain (loss) reclassified from AOCI into income	—	(359)	—	(70)

	Six months ended June 30,			
	2022		2021	
	Cost of goods sold	Interest (expense) income	Cost of goods sold	Interest (expense) income
Total amounts of income and expense line items presented in the statement of income in which the effects of cash flow hedges are recorded	$ (297,292)	$ (17,338)	$ (204,984)	$ (19,197)
Interest contracts:				
Amount of gain (loss) reclassified from AOCI into income	—	(598)	—	(179)

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 $286 as of June 30, 2022.

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The following table shows the effect of the Company's net investment hedges on AOCI and the condensed consolidated statements of income for the three and six months ended June 30, 2021:

	Amount of gain (loss) recognized in OCI on derivative		Location of gain (loss) reclassified from AOCI into income	Amount of gain (loss) reclassified from AOCI into income		Location of gain (loss) recognized in income on derivative (amount excluded from effectiveness testing)	Amount of gain (loss) recognized in income on derivative (amount excluded from effectiveness testing)	
	Three months ended June 30,			Three months ended September 30,			Three months ended September 30,	
	2022	2021		2022	2021		2022	2021
Cross-currency interest rate swaps	$ —	$ —	Net (loss) income from discontinued operations, net of tax	$ —	$ —	Interest (expense) income	$ —	$ —

	Amount of pre-tax gain (loss) recognized in OCI on derivative		Location of gain (loss) reclassified from AOCI into income	Amount of gain (loss) reclassified from AOCI into income		Location of gain (loss) recognized in income on derivative (amount excluded from effectiveness testing)	Amount of gain (loss) recognized in income on derivative (amount excluded from effectiveness testing)	
	Six months ended June 30,			Six months ended June 30,			Six months ended June 30,	
	2022	2021		2022	2021		2022	2021
Cross-currency interest rate swaps	$ —	$ 9,787	Net (loss) income from discontinued operations, net of tax	$ —	$ —	Interest (expense) income	$ —	$ 545

15. Income Taxes:

The effective income tax rate for the three months ended June 30, 2022 was 27.5% compared to (4,371.6)% for the three months ended June 30, 2021. The effective income tax rate for the six months ended June 30, 2022 was 32.4% compared to (30.9)% for the six months ended June 30, 2021. The Company's effective income tax rate has fluctuated primarily due to changes in income mix, discrete impacts related to intraperiod allocation revaluation of deferred tax assets and liabilities as a result of the divestiture of the Performance Chemicals business, tax rate changes and changes in foreign exchange gains and losses, which create permanent differences in certain jurisdictions.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the six months ended June 30, 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.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the six months ended June 30, 2021 was mainly due to state and local taxes, discrete tax impacts related to intra-period allocation revaluation of deferred tax assets and liabilities as a result of the Performance Chemicals divestiture, tax rate changes, and the tax effect of permanent differences related to foreign currency exchange gain or loss.

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16. Benefit Plans:

The following tables present the components of net periodic cost (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 June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Interest cost	604	551	1,207	1,102
Expected return on plan assets	(1,110)	(1,094)	(2,219)	(2,187)
Net periodic benefit	$ (506)	$ (543)	$ (1,012)	$ (1,085)

Other Postretirement Benefit Plan

	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Interest cost	5	4	9	8
Amortization of prior service credit	(53)	(58)	(105)	(116)
Amortization of net loss	1	2	2	3
Net periodic benefit	$ (47)	$ (52)	$ (94)	$ (105)

17. 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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18. Reportable Segments:

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

	Three months ended June 30,		Six months ended June 30,	
	2022	**2021**	**2022**	**2021**
Sales:				
Ecoservices	$ 192,968	$ 120,741	$ 347,028	$ 220,963
Catalyst Technologies[(1)]	32,204	26,215	57,858	52,617
Eliminations[(2)]	—	(4)	—	(4)
Total	$ 225,172	$ 146,952	$ 404,886	$ 273,576
Adjusted EBITDA:[(2)]				
Ecoservices	$ 59,984	$ 40,450	$ 109,325	$ 73,452
Catalyst Technologies[(3)]	21,429	20,714	38,404	39,183
Unallocated corporate expenses	(8,522)	(8,481)	(15,598)	(17,648)
Total	$ 72,891	$ 52,683	$ 132,131	$ 94,987

(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 11 to these condensed consolidated financial statements for further information). The proportionate share of sales is $35,906 and $64,883 for the three and six months ended June 30, 2022, respectively. The proportionate share of sales is $33,186 and $62,164 for the three and six months ended June 30, 2021, 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 $14,128 for the three months ended June 30, 2022, which includes $8,526 of equity in net income plus $1,600 of amortization of investment in affiliate step-up and $4,001 of joint venture depreciation, amortization and interest. The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $25,602 for the six months ended June 30, 2022, which includes $14,313 of equity in net income plus $3,201 of amortization of investment in affiliate step-up and $8,087 of joint venture depreciation, amortization and interest.

The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $12,055 for the three months ended June 30, 2021, which includes $6,779 of equity in net income plus $1,620 of amortization of investment in affiliate step-up and $3,656 of joint venture depreciation, amortization and interest. The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $22,592 for the six months ended June 30, 2021, which includes $12,014 of equity in net income plus $3,278 of amortization of investment in affiliate step-up and $7,300 of joint venture depreciation, amortization and interest.

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

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

	Three months ended June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Reconciliation of net income (loss) from continuing operations to Adjusted EBITDA				
Net income (loss) from continuing operations	$ 19,245	$ (7,870)	$ 27,120	$ (10,618)
Provision for income taxes	7,297	7,694	13,017	2,504
Interest expense, net	8,888	8,741	17,338	19,197
Depreciation and amortization	19,658	19,985	39,204	39,485
EBITDA	55,088	28,550	96,679	50,568
Joint venture depreciation, amortization and interest	4,001	3,656	8,087	7,300
Amortization of investment in affiliate step-up	1,601	1,620	3,201	3,278
Debt extinguishment costs	—	11,717	—	11,717
Net loss on asset disposals	573	1,601	706	2,379
Foreign exchange losses (gains)	502	(1,219)	1,148	3,882
LIFO expense (benefit)	187	(450)	432	(703)
Transaction and other related costs	790	610	5,070	1,083
Equity-based compensation	5,385	6,339	12,679	12,644
Restructuring, integration and business optimization expenses	4,746	71	5,098	2,330
Defined benefit pension plan benefit	(553)	(595)	(1,106)	(1,190)
Other	571	783	137	1,699
Adjusted EBITDA	$ 72,891	$ 52,683	$ 132,131	$ 94,987

19. 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 June 30, 2022, 9,327,270 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 six months ended June 30, 2022, the Company granted2,750,234 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 six months ended June 30, 2022, 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 awards granted during the six months ended June 30, 2022 also included a special grant for certain employees based on service which cliff vests on July 1, 2023. The value of the restricted stock units granted during the six months ended June 30, 2022 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.

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

Performance Stock Units

2022 Grants

During the six months ended June 30, 2022, the Company granted295,132 performance stock units (at target) under its equity incentive plan. The performance stock units granted during the six months ended June 30, 2022 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, 2022 through December 31, 2024. 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 Company's compensation and governance committee certifies the achievement of the performance metric for the three-year period ending December 31, 2024, 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, 2024.

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 $8.82 weighted average fair value of the awards granted during the six months ended June 30, 2022, with the following weighted average assumptions:

Expected dividend yield	—	%
Risk-free interest rate	1.51	%
Expected volatility	44.51	%
Expected term (in years)	2.91	

2019 Grants

During the six months ended June 30, 2022, the Compensation Committee of the Company's Board certified the achievement of the performance metrics for the three-year period ended December 31, 2021, related to the performance stock units granted during the year ended December 31, 2019. These awards provided the recipients with the right to receive shares of common stock dependent on the achievement of two Company-specific financial performance targets and the provision of service through the vesting date, with each award holder eligible to earn a percentage of the target number of shares granted to the holder, ranging from zero to 200%. The awards vested during the six months ended June 30, 2022 at 100% of target.

Award Activity

The following table summarizes the activity for the Company's restricted stock units and performance stock units for the six months ended June 30, 2022:

	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, 2021	2,507,421	$ 15.68	1,117,555	$ 16.91
Granted	2,750,234	$ 10.28	295,132	$ 8.82
Vested	(1,325,654)	$ 15.67	(496,442)	$ 15.41
Forfeited	(945,212)	$ 12.64	(165,807)	$ 12.46
Nonvested as of June 30, 2022	2,986,789	$ 11.68	750,438	$ 15.70

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

Stock-Based Compensation Expense

For the three months ended June 30, 2022 and 2021, stock-based compensation expense for the Company was $5,385 and $6,339, respectively. The associated income tax benefit recognized in the statements of income for the three months ended June 30, 2022 and 2021 was $1,321 and $1,552, respectively.

For the six months ended June 30, 2022 and 2021, stock-based compensation expense for the Company was $12,679 and $12,644, respectively. The associated income tax benefit recognized in the statements of income for the six months ended June 30, 2022 and 2021 was $3,109 and $3,095, respectively.

As of June 30, 2022, unrecognized compensation cost was $28,229 for restricted stock units and $4,353 for performance stock units considered probable of vesting. The weighted-average period over which these costs are expected to be recognized at June 30, 2022 was 1.70 years for the restricted stock units and 1.72 years for the performance stock units. Activity related to the Company's stock options and restricted stock awards was not material for the six months ended June 30, 2022.

20. 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 June 30,		Six months ended June 30,	
	2022	2021	2022	2021
Weighted average shares outstanding – Basic	138,035,764	136,095,060	137,876,185	136,072,165
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	1,113,796	—	1,299,474	—
Weighted average shares outstanding – Diluted	139,149,560	136,095,060	139,175,659	136,072,165

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

	Three months ended June 30, 2022	Three months ended June 30, 2021	Six months ended June 30, 2022	Six months ended June 30, 2021
Numerator:				
Income (loss) from continuing operations attributable to Ecovyst Inc.	$ 19,245	$ (7,870)	$ 27,120	$ (10,618)
Income (loss) from discontinued operations attributable to Ecovyst Inc.	—	6,380	—	(83,507)
Net income (loss) attributable to Ecovyst Inc.	$ 19,245	$ (1,490)	$ 27,120	$ (94,125)
Denominator:				
Weighted average shares outstanding – Basic	138,035,764	136,095,060	137,876,185	136,072,165
Weighted average shares outstanding – Diluted	139,149,560	136,095,060	139,175,659	136,072,165
Net income (loss) per share:				
Basic income (loss) per share - continuing operations	$ 0.14	$ (0.06)	$ 0.20	$ (0.08)
Diluted income (loss) per share - continuing operations	$ 0.14	$ (0.06)	$ 0.19	$ (0.08)
Basic loss per share - discontinued operations	$ —	$ 0.05	$ —	$ (0.61)
Diluted loss per share - discontinued operations	$ —	$ 0.05	$ —	$ (0.61)
Basic income (loss) per share	$ 0.14	$ (0.01)	$ 0.20	$ (0.69)
Diluted income (loss) per share	$ 0.14	$ (0.01)	$ 0.19	$ (0.69)

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 June 30, 2022	Three months ended June 30, 2021	Six months ended June 30, 2022	Six months ended June 30, 2021
Restricted stock awards with performance only targets not yet achieved	603,993	846,715	608,921	864,946
Stock options with performance only targets not yet achieved	321,368	376,812	324,014	376,812
Anti-dilutive restricted stock awards, restricted stock units and performance stock units	821,278	—	—	—
Anti-dilutive stock options	807,301	—	807,301	—

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. 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 combination of the options' exercise price and remaining unamortized stock-based compensation expense was greater than the average market price of the common shares. Anti-dilutive awards are not included in the dilution calculation, as their inclusion would have the effect of increasing diluted income per share.

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21. Supplemental Cash Flow Information:

With the exception of operating leases, the following table presents supplemental cash flow information for the consolidated Company:

	Six months ended June 30,	
	2022	**2021**
Cash paid during the period for:		
Income taxes, net of refunds	$ 19,843	$ 12,269
Interest[(1)]	15,818	28,794
Non-cash investing activity:		
Capital expenditures acquired on account but unpaid as of the period end	2,943	9,230
Non-cash financing activity:		
Accrued share repurchases (Note 6)	1,715	—
Right-of-use assets obtained in exchange for new lease liabilities (non-cash):		
Operating leases	4,370	5,933

(1) Cash paid for interest is shown net of capitalized interest for the periods presented and excludes $2,307 of net interest proceeds on swaps designated as net investment hedges for the six months ended June 30, 2021, which are included within cash flows from investing activities, discontinued operations in the Company's condensed consolidated statements of cash flows.

The following table provides a reconciliation of cash, cash equivalents and restricted cash reported within the condensed consolidated balance sheets as of June 30, 2022 and 2021 to the total of the same amounts shown in the condensed consolidated statements of cash flows for the six months then ended:

	June 30,	
	2022	**2021**
Cash and cash equivalents	$ 151,228	$ 55,757
Restricted cash included in prepaid and other current assets	—	1,651
Total cash, cash equivalents and restricted cash shown in the condensed consolidated statements of cash flows	$ 151,228	$ 57,408

22. Subsequent Events:

In July 2022, the Company repurchased 1,077,640 shares on the open market at an average price of $9.77, for a total of $10,553 as part of the approved stock repurchase program. See Note 6 to these condensed consolidated financial statements for further information.

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, the impact of the novel coronavirus ("COVID-19") pandemic 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 ongoing 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, 2021, as supplemented by “Item 1A, Risk Factors” in our quarterly report on Form 10-Q for the quarter ended March 31, 2022, as updated in “Item 1A, Risk Factors” in our quarterly report on Form 10-Q for the quarter ended June 30, 2022.

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 may create global economic and political uncertainties and potential 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 and our sales to a customer in Russia were immaterial for the six months ended June 30, 2022 and 2021, respectively. 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.

Stock Repurchase Program

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.

From the announcement date of the program through June 30, 2022, the Company repurchased 893,123 shares on the open market at an average price of $9.88 per share, for a total of $8.8 million, of which $1.7 million was accrued as of June 30, 2022. As of June 30, 2022, $441.2 million was available for additional share repurchases under the program.

In July 2022, the Company repurchased 1,077,640 shares on the open market at an average price of $9.77, for a total of $10.6 million as part of the approved stock repurchase program, which reduced availability for additional share repurchases under the program to $430.6 million.

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' sales have grown despite delays in shipments from supply chain constraints. Demand for our products continued to grow from the lows experienced due to the impact of the COVID-19 global pandemic and extreme weather experienced in the Gulf region in 2021. Polyethylene demand has remained strong, driven by the growing consumer demand for stronger and lighter weighted plastics. Higher refinery utilization rates increased catalyst demand for both traditional and renewable fuels on the continued recovery in vehicle miles driven. Tightening gasoline standards and growing demand for premium grade gasoline to power fuel efficient engines has supported high alkylation utilization rates. Virgin sulfuric acid has benefited from strong mining for metals and minerals which provide conductivity in low carbon technologies, as well as strong demand from numerous industrial segments producing construction, auto, and packaging materials.

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, 2021 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 for use in the packaging and engineered plastics, 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 5% of our sales for the six months ended June 30, 2022 and 6% for the year ended December 31, 2021 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 June 30, 2022 Compared to the Three Months Ended June 30, 2021

Highlights

The following is a summary of our financial performance for the three months ended June 30, 2022 compared with the three months ended June 30, 2021.

Sales

- Sales increased $78.2 million to $225.2 million. The increase in sales was primarily due to higher sales volumes and higher average selling prices, including the favorable pass-through of sulfur pricing.

Gross Profit

- Gross profit increased $21.4 million to $59.9 million. The increase in gross profit was primarily due to higher sales volumes and favorable pricing, partially offset by higher manufacturing costs.

Operating Income

- Operating income increased by $15.8 million to $27.4 million. The increase in operating income was due to an increase in gross profit, which was partially offset by higher other operating expenses.

Equity in Net Income of Affiliated Companies

- Equity in net income of affiliated companies for the three months ended June 30, 2022 was $8.5 million, compared to $6.8 million for the three months ended June 30, 2021. The increase of $1.7 million was due to higher earnings generated by the Zeolyst Joint Venture for the three months ended June 30, 2022, driven by higher sales within the joint venture.

The following is our unaudited condensed consolidated statements of income and a summary of financial results for the three months ended June 30, 2022 and 2021:

	Three months ended June 30,		Change	
	2022	2021	$	%
	(in millions, except percentages)			
Sales	$ 225.2	$ 147.0	$ 78.2	53.2 %
Cost of goods sold	165.3	108.5	56.8	52.4 %
Gross profit	59.9	38.5	21.4	55.6 %
Gross profit margin	*26.6 %*	*26.2 %*		
Selling, general and administrative expenses	22.8	21.9	0.9	4.1 %
Other operating expense, net	9.7	5.0	4.7	94.0 %
Operating income	27.4	11.6	15.8	136.2 %
Operating income margin	*12.2 %*	*7.9 %*		
Equity in net (income) from affiliated companies	(8.5)	(6.8)	(1.7)	25.0 %
Interest expense, net	8.9	8.7	0.2	2.3 %
Debt extinguishment costs	—	11.7	(11.7)	(100.0)%
Other expense (income), net	0.5	(1.8)	2.3	(127.8)%
Income (loss) before income taxes and noncontrolling interest	26.5	(0.2)	26.7	NM
Provision for income taxes	7.3	7.7	(0.4)	(5.2)%
Effective tax rate	*27.5 %*	*(4,371.6)%*		
Net income (loss) from continuing operations	19.2	(7.9)	27.1	(343.0)%
Net income from discontinued operations, net of tax	—	6.5	(6.5)	(100.0)%
Net income (loss)	19.2	(1.4)	20.6	NM
Less: Net income attributable to the noncontrolling interest—discontinued operations	—	0.1	(0.1)	(100.0)%
Net income (loss) attributable to Ecovyst Inc.	$ 19.2	$ (1.5)	$ 20.7	NM

Sales

	Three months ended June 30,		Change	
	2022	2021	$	%
	(in millions, except percentages)			
Sales:				
Ecoservices	$ 193.0	$ 120.8	$ 72.2	59.8 %
Catalyst Technologies	32.2	26.2	6.0	22.9 %
Total sales	$ 225.2	$ 147.0	$ 78.2	53.2 %

Ecoservices: Sales in Ecoservices for the three months ended June 30, 2022 were $193.0 million, an increase of $72.2 million, or 59.8%, compared to sales of $120.8 million for the three months ended June 30, 2021. The increase in sales was due to higher average selling prices of $56.0 million and an increase in volumes of $16.2 million.

Higher average selling prices were primarily a result of the pass-through of higher sulfur costs of $36.6 million within our virgin sulfuric acid product group and the pass-through of other raw material costs within our regenerations services product group. The increase in volumes was primarily driven by strong demand for virgin sulfuric acid and regeneration services.

Catalyst Technologies: Sales in Catalyst Technologies for the three months ended June 30, 2022 were $32.2 million, an increase of $6.0 million, or 22.9%, compared to sales of $26.2 million for the three months ended June 30, 2021. The increase in sales was due to an increase in volumes of $3.4 million, driven by demand for our polyethylene catalysts, and an increase in price of $3.5 million, primarily driven by price increases implemented late in 2021.

Gross Profit

Gross profit for the three months ended June 30, 2022 was $59.9 million, an increase of $21.4 million, or 55.6%, compared with $38.5 million for the thre months ended June 30, 2021. The increase in gross profit was due to higher sales volumes of $14.6 million, favorable customer pricing of $96.1 million, which was partially offset by unfavorable manufacturing costs of $87.2 million and product mix of $2.1 million.

The favorable change in volumes was a result of increased demand for our high-margin polyethylene catalysts, virgin sulfuric acid, and regeneration services. Favorable customer pricing was primarily driven by increased prices to cover rising variable costs, including the pass-through of sulfur, labor index and energy costs within our Ecoservices business. The increase in manufacturing costs was a result of higher variable costs, maintenance and transportation costs.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the three months ended June 30, 2022 were $22.8 million, an increase of $0.9 million compared with $21.9 million for the three months ended June 30, 2021. The increase in selling, general and administrative expenses was due to an increase in compensation-related expenses. For the three months ended June 30, 2021, selling, general, and administrative expenses included income generated from the transition service agreement entered into as part of the sale of the Performance Materials and Performance Chemicals businesses.

Other Operating Expense, Net

Other operating expense, net for the three months ended June 30, 2022 was $9.7 million, an increase of $4.7 million, compared with $5.0 million for the three months ended June 30, 2021. The increase in other operating expense, net, was a result of severance charges under the contracts associated with former executives incurred in the current period.

Equity in Net Income of Affiliated Companies

Equity in net income of affiliated companies for the three months ended June 30, 2022 was $8.5 million, compared to $6.8 million for the three months ended June 30, 2021. The increase was primarily due to $1.7 million of higher earnings from the Zeolyst Joint Venture during the three months ended June 30, 2022 as compared to the three months ended June 30, 2021. The increase in earnings from the Zeolyst Joint Venture was due to increased demand for our hydrocracking and specialty catalysts.

Interest Expense, Net

Interest expense, net for the three months ended June 30, 2022 was $8.9 million, an increase of $0.2 million, as compared with $8.7 million for the three months ended June 30, 2021. The increase in interest expense, net was primarily due to the year over year increase in variable rate debt, which was partially offset by lower outstanding debt during the three months ended June 30, 2022 as compared to the three months ended June 30, 2021.

Debt Extinguishment Costs

Debt extinguishment costs for the three months ended June 30, 2021 were$11.7 million.

In June 2021, we entered into an agreement for a new senior secured term loan facility and used the proceeds to repay portions of our existing term loan facilities. As a result of this transaction, we recorded $5.7 million of new creditor and third-party financing costs as debt extinguishment costs during the three months ended June 30, 2021. In addition, previous unamortized deferred financing costs of $1.7 million and original issue discount of $3.7 million associated with the previously outstanding debt were written off as debt extinguishment costs.

In June 2021, we amended our ABL Credit Agreement to decrease the aggregate amount of revolving loan commitments and extend the maturity date. As a result of the amendment, we wrote off $0.6 million of unamortized deferred financing costs as debt extinguishment costs.

Other Expense (Income), Net

Other income, net for the three months ended June 30, 2022 was income of $0.5 million, a decrease of $2.3 million, as compared with income of $1.8 million for the three months ended June 30, 2021. The change in other expense, net primarily consisted of a decrease in foreign currency gains related to the non-permanent intercompany debt denominated in local currency and translated to the U.S. dollar.

Provision for Income Taxes

The provision for income taxes for the three months ended June 30, 2022 was $7.3 million compared to a $7.7 million provision for the three months ended June 30, 2021. The effective income tax rate for the three months ended June 30, 2022 was 27.5% compared to (4,371.6)% for the three months ended June 30, 2021.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the three months ended June 30, 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.

Net Income (Loss) Attributable to Ecovyst

For the foregoing reasons and after the effect of the non-controlling interest in earnings of subsidiaries for each period presented, net loss attributable to Ecovyst was $19.2 million for the three months ended June 30, 2022 compared with net income of $1.5 million for the three months ended June 30, 2021.

Adjusted EBITDA

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

	Three months ended June 30,		Change	
	2022	**2021**	**$**	**%**
	(in millions, except percentages)			
Segment Adjusted EBITDA:[1]				
Ecoservices	$ 60.0	$ 40.5	$ 19.5	48.1 %
Catalyst Technologies[2]	21.4	20.7	0.7	3.4 %
Unallocated corporate expenses	(8.5)	(8.5)	—	— %
Total Adjusted EBITDA	$ 72.9	$ 52.7	$ 20.2	38.3 %

(1) We define Segment 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 Segment Adjusted EBITDA. Segment 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. Segment 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 was $14.1 million for the three months ended June 30, 2022, which includes $8.5 million of equity in net income, excluding $1.6 million of amortization of investment in affiliate step-up plus $4.0 million of joint venture depreciation, amortization and interest. The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment was $12.1 million for the three months ended June 30, 2021, which includes $6.8 million of equity in net income, excluding $1.6 million of amortization of investment in affiliate step-up plus $3.7 million of joint venture depreciation, amortization and interest.

Ecoservices: Adjusted EBITDA for the three months ended June 30, 2022 was $60.0 million, an increase of $19.5 million, or 48.1%, compared with $40.5 million for the three months ended June 30, 2021. The increase in Adjusted EBITDA was a result of favorable regeneration services and virgin sulfuric acid pricing and volumes, offset by higher raw material and operating costs.

Catalyst Technologies: Adjusted EBITDA for the three months ended June 30, 2022 was $21.4 million, an increase of $0.7 million, or 3.4%, compared with $20.7 million for the three months ended June 30, 2021. The slight increase in Adjusted EBITDA was primarily a result of higher sales volumes and higher average selling prices, partially offset by unfavorable product mix and higher production costs.

A reconciliation of net income (loss) from continuing operations to Adjusted EBITDA is as follows:

	Three months ended June 30, 2022	Three months ended June 30, 2021
	(in millions)	
Reconciliation of net income (loss) from continuing operations to Adjusted EBITDA		
Net income (loss) from continuing operations	$ 19.2	$ (7.9)
Provision for income taxes	7.3	7.7
Interest expense, net	8.9	8.7
Depreciation and amortization	19.7	20.0
EBITDA	55.1	28.5
Joint venture depreciation, amortization and interest[(a)]	4.0	3.7
Amortization of investment in affiliate step-up[(b)]	1.6	1.6
Debt extinguishment costs	—	11.7
Net loss on asset disposals[(c)]	0.6	1.6
Foreign currency exchange loss (gain)[(d)]	0.5	(1.2)
LIFO expense (benefit)[(e)]	0.2	(0.5)
Transaction and other related costs[(f)]	0.8	0.6
Equity-based compensation	5.4	6.3
Restructuring, integration and business optimization expenses[(g)]	4.7	0.1
Defined benefit pension benefit[(h)]	(0.6)	(0.6)
Other[(i)]	0.6	0.9
Adjusted EBITDA	$ 72.9	$ 52.7

(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 (the "Business Combination"). 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, which primarily relates 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) Represents adjustments for defined benefit pension plan (benefit) costs in our statements of income. All of our defined benefit pension plan obligations are under defined benefit pension plans that are frozen. As such, we do not view such income or expenses as core to our ongoing business operations.

(i) Other costs consist of certain expenses that are not core to our ongoing business operations, including environmental remediation-related costs, capital and franchise taxes. 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 (loss) information is shown below in the following table:

	Three months ended June 30,					
	2022			2021		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Reconciliation of net income (loss) from continuing operations to Adjusted Net Income[1] [2]						
Net income (loss) attributable to Ecovyst Inc.	$ 26.5	$ 7.3	$ 19.2	$ (0.2)	$ 7.7	$ (7.9)
Amortization of investment in affiliate step-up[b]	1.6	0.4	1.2	1.6	0.4	1.2
Debt extinguishment costs	—	—	—	11.7	3.1	8.6
Net loss on asset disposals[c]	0.6	0.2	0.4	1.6	0.4	1.2
Foreign currency exchange loss (gain)[d]	0.5	0.1	0.4	(1.2)	(0.4)	(0.8)
LIFO expense (benefit)[e]	0.2	—	0.2	(0.5)	(0.1)	(0.4)
Transaction and other related costs[f]	0.8	0.2	0.6	0.6	0.2	0.4
Equity-based compensation	5.4	0.7	4.7	6.3	1.7	4.6
Restructuring, integration and business optimization expenses[g]	4.7	1.2	3.5	0.1	—	0.1
Defined benefit pension plan benefit[h]	(0.6)	—	(0.6)	(0.6)	(0.2)	(0.4)
Other[i]	0.6	0.1	0.5	0.9	0.4	0.5
Adjusted Net Income, including Intraperiod allocation	$ 40.3	$ 10.2	$ 30.1	$ 20.3	$ 13.2	$ 7.1
Intraperiod allocation for restating discontinued operations[3]	—	—	—	—	(7.8)	7.8
Adjusted Net Income	$ 40.3	$ 10.2	$ 30.1	$ 20.3	$ 5.4	$ 14.9

(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) Due to the sale of the Performance Chemicals business, the tax rates used to value deferred tax assets ("DTAs") and deferred tax liabilities ("DTLs") needs to be adjusted. Given it is a direct result of the sale of discontinued operations and the need to adjust the tax rates arose because of discontinued operations, the impact of revaluing the reporting entity's DTAs and DTLs are reflected in continuing operations.

The adjustments to net income attributable to Ecovyst Inc. are shown net of applicable tax rates as determined by the calculation of our quarterly tax provision under interim financial reporting for the three months ended June 30, 2022 and June 30, 2021, except for the foreign currency exchange loss, impacts of tax rate changes and the effects of the sale of assets for which the taxes are calculated as discrete items using the applicable statutory income tax rates.

Results of Operations

Six Months Ended June 30, 2022 Compared to the Six Months Ended June 30, 2021

Highlights

The following is a summary of our financial performance for the six months ended June 30, 2022 compared with the six months ended June 30, 2021.

Sales

- Sales increased $131.3 million to $404.9 million. The increase in sales was primarily due to higher sales volumes and higher average selling prices, including the favorable pass-through of sulfur pricing.

Gross Profit

- Gross profit increased $39.0 million to $107.6 million. The increase in gross profit was primarily due to the higher sales volume and favorable pricing, partially offset by higher manufacturing costs.

Operating Income

- Operating income increased by $29.8 million to $43.9 million. The increase in operating income was due to an increase in gross profit, partially offset by higher selling, general, and administrative expenses and other operating expenses.

Equity in Net Income of Affiliated Companies

- Equity in net income of affiliated companies for the six months ended June 30, 2022 was $14.3 million, compared with $12.0 million for the six months ended June 30, 2021. The increase was primarily due to $2.3 million of higher earnings from the Zeolyst Joint Venture during the six months ended June 30, 2022, driven by higher sales within the joint venture.

The following is our unaudited condensed consolidated statements of income and a summary of financial results for the six months ended June 30, 2022 and 2021:

	Six months ended June 30,		Change	
	2022	2021	$	%
	(in millions, except percentages)			
Sales	$ 404.9	$ 273.6	$ 131.3	48.0 %
Cost of goods sold	297.3	205.0	92.3	45.0 %
Gross profit	107.6	68.6	39.0	56.9 %
Gross profit margin	*26.6 %*	*25.1 %*		
Selling, general and administrative expenses	46.3	44.0	2.3	5.2 %
Other operating expense, net	17.4	10.5	6.9	65.7 %
Operating income	43.9	14.1	29.8	211.3 %
Operating income margin	*10.8 %*	*5.2 %*		
Equity in net (income) from affiliated companies	(14.3)	(12.0)	(2.3)	19.2 %
Interest expense, net	17.3	19.2	(1.9)	(9.9)%
Debt extinguishment costs	—	11.7	(11.7)	(100.0)%
Other expense, net	0.8	3.3	(2.5)	(75.8)%
Income before income taxes and noncontrolling interest	40.1	(8.1)	48.2	(595.1)%
Provision (benefit) for income taxes	13.0	2.5	10.5	420.0 %
Effective tax rate	*32.4 %*	*(30.9)%*		
Net income (loss) from continuing operations	27.1	(10.6)	37.7	(355.7)%
Net loss from discontinued operations, net of tax	—	(83.3)	83.3	(100.0)%
Net income (loss)	27.1	(93.9)	121.0	(128.9)%
Less: Net income attributable to the noncontrolling interest—discontinued operations	—	0.3	(0.3)	(100.0)%
Net income (loss) attributable to Ecovyst Inc.	$ 27.1	$ (94.2)	$ 121.3	(128.8)%

Sales

	Six months ended June 30,		Change	
	2022	2021	$	%
Sales:	(in millions, except percentages)			
Ecoservices	$ 347.0	$ 221.0	$ 126.0	57.0 %
Catalyst Technologies	57.9	52.6	5.3	10.1 %
Total sales	$ 404.9	$ 273.6	$ 131.3	48.0 %

Ecoservices: Sales in Ecoservices for the six months ended June 30, 2022 were $347.0 million, an increase of $126.0 million, or 57.0%, compared to sales of $221.0 million for the six months ended June 30, 2021. The increase in sales was due to higher average selling price of $93.2 million and an increase in sales volumes of $32.8 million. Higher average selling prices benefited from favorable pricing, including the pass-through of higher freight, labor, and energy indexed costs, as well as the pass-through of higher sulfur costs of $59.6 million. Sales volumes increased in both regeneration services and virgin sulfuric acid which was driven by demand recovery.

Catalyst Technologies: Sales in Catalyst Technologies for the six months ended June 30, 2022 were $57.9 million, an increase of $5.3 million, or 10.1%, compared to sales of $52.6 million for the six months ended June 30, 2021. The increase in sales was driven by price increases implemented late in 2021.

Gross Profit

Gross profit for the six months ended June 30, 2022 was $107.6 million, an increase of $39.0 million, or 56.9%, compared with $68.6 million for the six moths ended June 30, 2021. The increase in gross profit was due to favorable volumes of $26.3 million, higher pricing of $158.5 million, partially offset by higher manufacturing costs of $139.9 million and product mix of $5.9 million.

The increase in gross profit was driven by favorable pricing and pass through of higher variable and sulfur costs along with higher volume demand in both the Ecoservices and Catalyst Technologies businesses. Rising inflation costs on raw materials, energy, and transportation primarily drove the higher manufacturing costs that were more than offset in price.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the six months ended June 30, 2022 was $46.3 million, an increase of $2.3 million as compared to $44.0 million for the six months ended June 30, 2021. The increase in selling, general and administrative expenses was due to an increase in compensation-related expenses. For the six months ended June 30, 2021, selling, general, and administrative expenses included income generated from the transition service agreement entered into as part of the sale of the Performance Materials and Performance Chemicals businesses.

Other Operating Expense, Net

Other operating expense, net for the six months ended June 30, 2022 was $17.4 million, an increase of $6.9 million, compared with $10.5 million for the six months ended June 30, 2021. The increase in other operating expense, net, was a result of severance charges under the contracts associated with former executives incurred in the current period.

Equity in Net Income of Affiliated Companies

Equity in net income of affiliated companies for the six months ended June 30, 2022 was $14.3 million, compared to $12.0 million for the six months ended June 30, 2021. The increase was primarily due to $2.3 million of higher earnings from the Zeolyst Joint Venture during the six months ended June 30, 2022.

Interest Expense, Net

Interest expense, net for the six months ended June 30, 2022 was $17.3 million, a decrease of $1.9 million, as compared with $19.2 million for the six months ended June 30, 2021. The decrease in interest expense, net was primarily due to lower debt balances, partially offset by rising variable interest rates.

Debt Extinguishment Costs

Debt extinguishment costs were $11.7 million for the six months ended June 30, 2021.

In June 2021, we entered into an agreement for a new senior secured term loan facility and used the proceeds to repay a portion of our existing term loan facilities. As a result of this transaction, we recorded $5.7 million of new creditor and third-party financing costs as debt extinguishment costs during the three months ended June 30, 2021. In addition, previous unamortized deferred financing costs of $1.7 million and original issue discount of $3.7 million associated with the previously outstanding debt were written off as debt extinguishment costs.

In June 2021, we amended our ABL Credit Agreement to decrease the aggregate amount of revolving loan commitments and extend the maturity date. As a result of the amendment, we wrote off $0.6 million of unamortized deferred financing costs as debt extinguishment costs.

Other Expense, Net

Other expense, net for the six months ended June 30, 2022 was $0.8 million, a decrease of $2.5 million, as compared with income of $3.3 million for the six months ended June 30, 2021. The decrease in other expense, net primarily consisted of smaller foreign currency gain in the current year as compared to the prior year related to the non-permanent intercompany debt denominated in local currency and translated to the U.S. dollar, offset by net periodic benefit for the defined benefit pension and postretirement plans.

Provision (Benefit) for Income Taxes

The provision for income taxes for the six months ended June 30, 2022 was $13.0 million compared to a $2.5 million benefit for the six months ended June 30, 2021. The effective income tax rate for the six months ended June 30, 2022 was 32.4% compared to (30.9)% for the six months ended June 30, 2021.

The Company’s effective income tax rate fluctuates primarily due to GILTI, discrete impacts of the divestiture of the Performance Chemicals business, and tax rate changes.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the six months ended June 30, 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.

Net Income (Loss) Attributable to Ecovyst

For the foregoing reasons and after the effect of the non-controlling interest in earnings of subsidiaries for the period ending June 30, 2021, net income attributable to Ecovyst was $27.1 million for the six months ended June 30, 2022 compared with net loss of $94.2 million for the six months ended June 30, 2021.

Adjusted EBITDA

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

	Six months ended June 30,		Change	
	2022	2021	$	%
	(in millions, except percentages)			
Adjusted EBITDA:[1]				
Ecoservices	$ 109.3	$ 73.5	$ 35.8	48.7 %
Catalyst Technologies[2]	38.4	39.2	(0.8)	(2.0)%
Unallocated corporate expenses	(15.6)	(17.6)	2.0	(11.4)%
Total	$ 132.1	$ 95.0	$ 37.1	39.1 %

(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 $25.6 million for the six months ended June 30, 2022, which includes $14.3 million of equity in net income, excluding $3.2 million of amortization of investment in affiliate step-up plus $8.1 million of joint venture depreciation, amortization and interest. The Adjusted EBITDA from the Zeolyst Joint Venture included in the Catalyst Technologies segment is $22.6 million for the six months ended June 30, 2021, which includes $12.0 million of equity in net income, excluding $3.3 million of amortization of investment in affiliate step-up plus $7.3 million of joint venture depreciation, amortization and interest.

Ecoservices: Adjusted EBITDA for the six months ended June 30, 2022 was $109.3 million, an increase of $35.8 million, or 48.7%, compared with $73.5 million for the six months ended June 30, 2021. The increase in Adjusted EBITDA was a result of higher volumes, favorable pricing covering rising input costs, including the pass-through of higher sulfur costs, higher raw material and maintenance costs.

Catalyst Technologies: Adjusted EBITDA for the six months ended June 30, 2022 was $38.4 million, a decrease of $0.8 million, or 2.0%, compared with $39.2 million for the six months ended June 30, 2021. The slight decrease in Adjusted EBITDA was due to unfavorable product mix, as well as higher input and energy production costs, partially offset by higher sales volumes and price increases.

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A reconciliation of net income (loss) from continuing operations to Adjusted EBITDA is as follows:

	Six months ended June 30,	
	2022	2021
	(in millions)	
Reconciliation of net income (loss) from continuing operations to Adjusted EBITDA		
Net income (loss) from continuing operations	$ 27.1	$ (10.6)
Provision for income taxes	13.0	2.5
Interest expense, net	17.3	19.2
Depreciation and amortization	39.2	39.5
EBITDA	96.6	50.6
Joint venture depreciation, amortization and interest[(a)]	8.1	7.3
Amortization of investment in affiliate step-up[(b)]	3.2	3.3
Debt extinguishment costs	—	11.7
Net loss on asset disposals[(c)]	0.7	2.4
Foreign currency exchange loss[(d)]	1.1	3.9
LIFO expense (benefit)[(e)]	0.4	(0.7)
Transaction and other related costs[(f)]	5.1	1.1
Equity-based compensation	12.7	12.6
Restructuring, integration and business optimization expenses[(g)]	5.1	2.3
Defined benefit pension plan benefit[(h)]	(1.1)	(1.2)
Other[(i)]	0.2	1.7
Adjusted EBITDA	$ 132.1	$ 95.0

(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, primarily 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) Represents adjustments for defined benefit pension plan (benefit) costs in our statements of income. All of our defined benefit pension plan obligations are under defined benefit pension plans that are frozen. As such, we do not view such income or expenses as core to our ongoing business operations.

(i) Other costs consist of certain expenses that are not core to our ongoing business operations, including environmental remediation-related costs, capital and franchise taxes. 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:

	Six months ended June 30,					
	2022			2021		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Reconciliation of net income (loss) from continuing operations to Adjusted Net Income[1] [2]						
Net income (loss) attributable to Ecovyst Inc.	$ 40.1	$ 13.0	$ 27.1	$ (8.1)	$ 2.5	$ (10.6)
Amortization of investment in affiliate step-up[b]	3.2	0.8	2.4	3.3	0.9	2.4
Debt extinguishment costs	—	—	—	11.7	3.1	8.6
Net loss on asset disposals[c]	0.7	0.2	0.5	2.4	0.7	1.7
Foreign currency exchange loss[d]	1.1	0.2	0.9	3.9	1.1	2.8
LIFO expense (benefit)[e]	0.4	0.1	0.3	(0.7)	(0.2)	(0.5)
Transaction and other related costs[f]	5.1	1.2	3.9	1.1	0.3	0.8
Equity-based compensation[3]	12.7	0.4	12.3	12.6	3.5	9.1
Restructuring, integration and business optimization expenses[g]	5.1	1.3	3.8	2.3	0.6	1.7
Defined benefit pension plan benefit[h]	(1.1)	(0.2)	(0.9)	(1.2)	(0.3)	(0.9)
Other[i]	0.2	—	0.2	1.7	0.5	1.2
Adjusted Net Income, including Intraperiod allocation	$ 67.5	$ 17.0	$ 50.5	$ 29.0	$ 12.7	$ 16.3
Intraperiod allocation for restating discontinued operations[4]	—	—	—	—	(4.8)	4.8
Adjusted Net Income	$ 67.5	$ 17.0	$ 50.5	$ 29.0	$ 7.9	$ 21.1

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(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.

(4) Due to the sale of the Performance Chemicals business, the tax rates used to value deferred tax assets ("DTAs") and deferred tax liabilities ("DTLs") needs to be adjusted. Given it is a direct result of the sale of discontinued operations and the need to adjust the tax rates arose because of discontinued operations, the impact of revaluing the reporting entity's DTAs and DTLs are reflected in continuing operations.

The adjustments to net income attributable to Ecovyst Inc. are shown net of applicable tax rates of 26.0% and 27.7% for the six months ended June 30, 2022 and 2021, respectively, except for the foreign currency exchange loss, equity-based compensation, transactions and other related costs, and discrete impacts of the divestiture of the Performance Chemicals business.

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. 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 June 30, 2022, we had cash and cash equivalents of $151.2 million and availability of $84.8 million under our asset based lending revolving credit facility, after giving effect to $8.3 million of outstanding letters of credit, for a total available liquidity of $236.0 million. We did not have any revolving credit facility borrowings as of June 30, 2022. As of June 30, 2022, we were in compliance with all covenants under our debt agreements.

We held an immaterial balance of cash and cash equivalents in foreign jurisdictions as of June 30, 2022. We continue to repatriate cash held outside of the United States from certain foreign subsidiaries in order to meet domestic liquidity needs. Depending on domestic and foreign cash balances, we have certain flexibility to repatriate funds in order to meet those needs. Specifically, we have an intercompany loan structure in place with foreign subsidiaries that allows us to repatriate foreign cash in a 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 six months ended June 30, 2022 and 2021 was approximately $15.8 million and $28.8 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 $8.9 million on interest expense. We hedge the interest rate fluctuations on debt obligations through interest rate cap agreements. As of June 30, 2022, we had interest rate caps on $500.0 million of notional variable-rate debt with a cap rate of 0.84% through July 2022, $400.0 million of notional variable-rate debt with a cap rate of 1.00% through August 2023, $250.0 million of notional variable-rate debt with a cap rate of 1.00% through October 2024, and $250.0 million of notional variable-rate debt with a cap rate of 1.00% through October 2025.

The Company’s off-balance sheet arrangements include $8.3 million of outstanding letters of credit on our ABL Facility as of June 30, 2022.

Cash Flow

	Six months ended June 30, 2022	Six months ended June 30, 2021
	(in millions)	
Continuing Operations		
Net cash provided by (used in):		
Operating activities	$ 52.8	$ 37.2
Investing activities	(29.5)	(70.0)
Financing activities	(11.9)	(5.0)
Discontinued Operations		
Net cash provided by (used in):		
Operating activities	—	12.1
Investing activities	—	(32.0)
Financing activities	—	(1.1)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(1.1)	(3.3)
Net change in cash, cash equivalents and restricted cash	10.3	(62.1)
Cash, cash equivalents and restricted cash at beginning of period	140.9	137.2
Cash, cash equivalents and restricted cash at end of period	151.2	75.1
Less: cash, cash equivalents and restricted cash of discontinued operations	—	(17.6)
Cash, cash equivalents and restricted cash at end of period of continuing operations	$ 151.2	$ 57.4

	Six months ended June 30, 2022	Six months ended June 30, 2021
	(in millions)	
Continuing Operations		
Net income	$ 27.1	$ (10.6)
Non-cash and non-working capital related activities[1]	81.8	67.4
Changes in working capital	(51.7)	(15.2)
Other operating activities	(4.4)	(4.4)
Net cash provided by operating activities, continuing operations	$ 52.8	$ 37.2

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

	Six months ended June 30, 2022	Six months ended June 30, 2021
	(in millions)	
Continuing Operations		
Working capital changes that provided (used) cash:		
Receivables	$ (33.2)	$ (18.4)
Inventories	(3.1)	5.5
Prepaids and other current assets	—	(1.8)
Accounts payable	9.7	2.6
Accrued liabilities	(25.1)	(3.1)
	$ (51.7)	$ (15.2)

	Six months ended June 30,	
	2022	2021
	(in millions)	
Continuing Operations		
Purchases of property, plant and equipment	$ (25.8)	$ (28.0)
Payments for business divestiture	(3.7)	—
Business combinations, net of cash acquired	—	(42.0)
Net cash used in investing activities, continuing operations	$ (29.5)	$ (70.0)

	Six months ended June 30,	
	2022	2021
	(in millions)	
Continuing Operations		
Net cash borrowings (repayments) on debt obligations	$ (4.5)	$ (3.5)
Repurchases of common shares	(7.1)	—
Tax withholdings on equity award vesting	(0.3)	(1.5)
Net cash used in financing activities, continuing operations	$ (11.9)	$ (5.0)

The following discussions related to our cash flows are presented on a continuing operations basis, which excludes the cash flows from our Performance Materials and Performance Chemicals businesses accounted for as discontinued operations during the six months ended June 30, 2021.

Net cash provided by operating activities was $52.8 million for the six months ended June 30, 2022, compared to $37.2 million provided for the six months ended June 30, 2021. Cash generated by operating activities, other than changes in working capital, was higher during the six months ended June 30, 2022 by $52.2 million compared to the same period in the prior year. The change in working capital during the six months ended June 30, 2022 was unfavorable compared to the six months ended June 30, 2021. Cash used to fund working capital was $51.7 million and $15.2 million for the six months ended June 30, 2022 and 2021, respectively.

The increase in cash generated by operating activities, other than changes in working capital, was higher by $52.2 million as compared to the prior year period primarily due to an increase in operating profit and an increase in dividends received from affiliated companies. Prior year cash generated by operating activities includes debt extinguishment costs.

The decrease in cash from working capital of $36.5 million as compared to the prior year was primarily due to unfavorable changes in accounts receivable, inventories, and accrued liabilities which were partially offset by favorable changes in accounts payable and prepaids and other current assets.

The unfavorable change in accounts receivable was driven by the timing of sales as well as increased sales volume. The unfavorable change in inventory was due to the inflation costs on raw materials and finished goods, where as cash provided in prior period was due to the timing of sales orders and inventory build. The favorable change in accounts payable is due to the timing of vendor payments as well as lower capital spending. The unfavorable change in accrued liabilities relates to changes in various expense accruals.

Net cash used in investing activities was $29.5 million for the six months ended June 30, 2022, compared to cash used of $70.0 million during the same period in 2021. Cash used in investing activities consisted of utilizing $25.8 million and $28.0 million to fund capital expenditures during the six months ended June 30, 2022 and 2021, respectively. During the six months ended June 30, 2021, we acquired Chem32, LLC for $42.0 million. During the six months ended June 30, 2022, we made an additional payment related to our divestiture of our Performance Chemicals business representing the final adjustments to the sale price of $3.7 million.

Net cash used in financing activities was $11.9 million for the six months ended June 30, 2022, compared to net cash used of $5.0 million during the same period in 2021. Net cash used in financing activities was primarily driven by $4.5 million of debt repayment charges and repurchases of common stock of $7.1 million for the six months ended June 30, 2022.

Debt

	June 30, 2022	December 31, 2021
	(in millions)	
Senior Secured Term Loan Facility due June 2028	$ 891.0	$ 895.5
ABL Facility	—	—
Total debt	891.0	895.5
Original issue discount	(8.1)	(8.8)
Deferred financing costs	(4.5)	(4.9)
Total debt, net of original issue discount and deferred financing costs	878.4	881.8
Less: current portion	(9.0)	(9.0)
Total long-term debt, excluding current portion	$ 869.4	$ 872.8

As of June 30, 2022, our total debt was $891.0 million, excluding the original issue discount of $8.1 million and deferred financing fees of $4.5 million for our senior secured credit facilities. Our net debt as of June 30, 2022 was $739.8 million, including cash and cash equivalents of $151.2 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.

	Six months ended June 30,	
	2022	2021
	(in millions)	
Maintenance capital expenditures	$ 18.5	$ 19.7
Growth capital expenditures	3.6	4.1
Total capital expenditures	$ 22.1	$ 23.8

Capital expenditures remained at a level sufficient for required maintenance and certain expansion growth initiatives during these periods. Maintenance capital expenditures were lower in the six months ended June 30, 2022 compared to the six months ended June 30, 2021 due to lower turnaround expenditures. Growth capital expenditures were lower in the six months ended June 30, 2022 compared to the six months ended June 30, 2021, due to the completion of several expansion projects in 2021.

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, commodity price risk and credit risk. The audit committee of our board of directors regularly reviews foreign exchange, interest rate and commodity hedging 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 exchange risk, interest rate risk, commodity 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 June 30, 2022, 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 June 30, 2022 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, as supplemented by "Item 1A, Risk Factors" in our quarterly report on Form 10-Q for the quarter ended March 31, 2022, which we refer to as the First Quarter Form 10-Q, 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, as supplemented by our First Quarter Form 10-Q. The effects of the events and circumstances described in the following risk factor may have the additional effect of heightening many of the risks noted in our Annual Report on Form 10-K, as supplemented by our First Quarter Form 10-Q. Except as presented below, there have been no material changes from the risk factors described in our Annual Report on Form 10-K, as supplemented by our First Quarter Form 10-Q.

Unfavorable global economic conditions could adversely affect our business, financial condition, and results of operations.

Our results of operations could be adversely affected by general conditions in the global economy and in the global financial markets. For example, the global economy has experienced extreme volatility and disruptions, including significant volatility in commodity and market prices, including increasing energy prices, volatility in sulfur prices, declines in consumer confidence, declines in economic growth, supply chain interruptions, uncertainty about economic stability and record inflation globally. Unfavorable economic conditions could result in a variety of risks to our business, including demand and pricing for our products and difficulty in forecasting our financial results. A weak or declining economy also could strain our suppliers, possibly resulting in supply chain disruptions. In addition, inflation has increased our costs, which could impact our profitability. These and other economic factors could adversely impact our business and results of operations.

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

The following table contains information about purchases of our common stock during the second quarter of 2022:

	Total Number of Shares of Common Stock Purchased	Average Price Paid per Share of Common Stock [2]	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)
April 1, 2022 - April 30, 2022	—	$ —	—	$ 450,000
May 1, 2022 - May 31, 2022	—	$ —	—	$ 450,000
June 1, 2022 - June 30, 2022	893,123 [1]	$ 9.88	893,123	$ 441,158
Total	893,123			

[1] 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.

During the three months ended June 30, 2022, the Company repurchased 893,123 shares on the open market at an average price of $9.88 per share, for a total of $8.8 million. As of June 30, 2022, $441.2 million was available for additional share repurchases under the program.

In July 2022, the Company repurchased 1,077,640 shares on the open market at an average price of $9.77, for a total of $10.6 million as part of the approved stock repurchase program, which reduced availability for additional share repurchases under the program to $430.6 million.

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

ITEM 6. EXHIBITS.

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

Exhibit No.	Description
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 June 30, 2022, 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 June 30, 2022, 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: August 1, 2022	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 August 1, 2022

/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: August 1, 2022

/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 June 30, 2022 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: August 1, 2022

/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 June 30, 2022 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: August 1, 2022	/s/ MICHAEL FEEHAN
	Michael Feehan
	Vice President and Chief Financial Officer
	(Principal Financial Officer)