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

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2024

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 October 25, 2024 was116,509,803.

Ecovyst Inc.

INDEX—FORM 10-Q
September 30, 2024

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 September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Sales	$ 179,175	$ 173,326	$ 522,532	$ 518,310
Cost of goods sold	124,472	120,142	374,943	367,662
Gross profit	54,703	53,184	147,589	150,648
Selling, general and administrative expenses	19,950	16,945	64,260	59,460
Other operating expense, net	3,212	4,310	9,987	17,288
Operating income	31,541	31,929	73,342	73,900
Equity in net (income) from affiliated companies	922	(4,708)	(2,543)	(16,305)
Interest expense, net	11,305	11,811	37,609	30,812
Debt extinguishment costs	—	—	4,560	—
Other expense, net	566	361	1,193	543
Income before income taxes	18,748	24,465	32,523	58,850
Provision for income taxes	4,497	7,891	8,756	17,625
Net income	$ 14,251	$ 16,574	$ 23,767	$ 41,225
Net income per share:				
Basic income per share	$ 0.12	$ 0.14	$ 0.20	$ 0.35
Diluted income per share	$ 0.12	$ 0.14	$ 0.20	$ 0.34
Weighted average shares outstanding:				
Basic	116,490,634	116,446,085	116,786,759	119,042,161
Diluted	117,187,054	117,374,347	117,425,254	120,417,132

See accompanying notes to condensed consolidated financial statements.

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

	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Net income	$ 14,251	$ 16,574	$ 23,767	$ 41,225
Other comprehensive income (loss), net of tax:				
Pension and postretirement benefits	3	(213)	527	228
Net (loss) gain from hedging activities	(11,654)	1,128	(8,865)	(1,393)
Foreign currency translation	6,403	(3,112)	4,040	(99)
Total other comprehensive loss	(5,248)	(2,197)	(4,298)	(1,264)
Comprehensive income	$ 9,003	$ 14,377	$ 19,469	$ 39,961

See accompanying notes to condensed consolidated financial statements.

Table of Contents

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

	September 30, 2024	December 31, 2023
ASSETS		
Cash and cash equivalents	$ 123,474	$ 88,365
Accounts receivable, net	74,023	81,314
Inventories, net	53,709	45,115
Derivative assets	6,192	13,419
Prepaid and other current assets	26,131	17,774
Total current assets	283,529	245,987
Investments in affiliated companies	410,400	440,198
Property, plant and equipment, net	571,721	576,904
Goodwill	405,792	404,470
Other intangible assets, net	106,588	116,550
Right-of-use lease assets	25,686	24,281
Other long-term assets	36,315	29,361
Total assets	$ 1,840,031	$ 1,837,751
LIABILITIES		
Current maturities of long-term debt	$ 8,730	$ 9,000
Accounts payable	33,389	40,195
Operating lease liabilities—current	7,982	8,193
Accrued liabilities	61,713	61,693
Total current liabilities	111,814	119,081
Long-term debt, excluding current portion	853,942	858,946
Deferred income taxes	108,541	115,791
Operating lease liabilities—noncurrent	17,582	16,030
Other long-term liabilities	18,782	22,439
Total liabilities	1,110,661	1,132,287
Commitments and contingencies (Note 15)		
EQUITY		
Common stock ($0.01 par); authorized shares 450,000,000; issued shares 140,872,846 and 140,744,045 on September 30, 2024 and December 31, 2023, respectively; outstanding shares 116,509,803 and 116,116,895 on September 30, 2024 and December 31, 2023, respectively	1,409	1,407
Preferred stock ($0.01 par); authorized shares 50,000,000; no shares issued or outstanding on September 30, 2024 and December 31, 2023	—	—
Additional paid-in capital	1,103,361	1,102,581
Accumulated deficit	(147,089)	(170,856)
Treasury stock, at cost; shares 24,363,043 and 24,627,150 on September 30, 2024 and December 31, 2023, respectively	(223,055)	(226,710)
Accumulated other comprehensive loss	(5,256)	(958)
Total equity	729,370	705,464
Total liabilities and equity	$ 1,840,031	$ 1,837,751

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)	Total
Balance, December 31, 2023	$ 1,407	$ 1,102,581	$ (170,856)	$ (226,710)	$ (958)	$ 705,464
Net income	—	—	1,221	—	—	1,221
Other comprehensive income	—	—	—	—	2,174	2,174
Tax withholdings on equity award vesting	—	—	—	(1,218)	—	(1,218)
Stock compensation expense	—	3,674	—	—	—	3,674
Shares issued under equity incentive plan, net of forfeitures	2	(9,290)	—	9,329	—	41
Balance, March 31, 2024	$ 1,409	$ 1,096,965	$ (169,635)	$ (218,599)	$ 1,216	$ 711,356
Net income	—	—	8,295	—	—	8,295
Other comprehensive loss	—	—	—	—	(1,224)	(1,224)
Repurchases of common shares	—	—	—	(5,010)	—	(5,010)
Stock compensation expense	—	3,827	—	—	—	3,827
Shares issued under equity incentive plan, net of forfeitures	—	(43)	—	82	—	39
Balance, June 30, 2024	$ 1,409	$ 1,100,749	$ (161,340)	$ (223,527)	$ (8)	$ 717,283
Net income	—	—	14,251	—	—	14,251
Other comprehensive loss	—	—	—	—	(5,248)	(5,248)
Stock compensation expense	—	2,952	—	—	—	2,952
Shares issued under equity incentive plan, net of forfeitures	—	(340)	—	472	—	132
Balance, September 30, 2024	$ 1,409	$ 1,103,361	$ (147,089)	$ (223,055)	$ (5,256)	$ 729,370

Table of Contents

	Common stock	Additional paid-in capital	(Accumulated deficit)	Treasury stock, at cost	Accumulated other comprehensive income	Total
Balance, December 31, 2022	$ 1,396	$ 1,091,475	$ (242,010)	$ (149,624)	$ 5,992	$ 707,229
Net loss	—	—	(1,471)	—	—	(1,471)
Other comprehensive loss	—	—	—	—	(5,759)	(5,759)
Repurchases of common shares	—	—	—	(29,850)	—	(29,850)
Tax withholdings on equity award vesting	—	—	—	(866)	—	(866)
Stock compensation expense	—	4,756	—	—	—	4,756
Shares issued under equity incentive plan, net of forfeitures	10	102	—	—	—	112
Balance, March 31, 2023	$ 1,406	$ 1,096,333	$ (243,481)	$ (180,340)	$ 233	$ 674,151
Net income	—	—	26,122	—	—	26,122
Other comprehensive income	—	—	—	—	6,692	6,692
Repurchases of common shares	—	—	—	(43,524)	—	(43,524)
Excise tax on repurchases of common shares	—	—	—	(630)	—	(630)
Stock compensation expense	—	4,739	—	—	—	4,739
Shares issued under equity incentive plan, net of forfeitures	1	213	—	—	—	214
Balance, June 30, 2023	$ 1,407	$ 1,101,285	$ (217,359)	$ (224,494)	$ 6,925	$ 667,764
Net income	—	—	16,574	—	—	16,574
Other comprehensive loss	—	—	—	—	(2,197)	(2,197)
Repurchases of common shares	—	—	—	(5,344)	—	(5,344)
Tax withholdings on equity award vesting	—	—	—	(2,506)	—	(2,506)
Excise tax on repurchases of common shares	—	—	—	(8)	—	(8)
Stock compensation expense	—	3,392	—	—	—	3,392
Shares issued under equity incentive plan, net of forfeitures	—	(5,461)	—	5,642	—	181
Balance, September 30, 2023	$ 1,407	$ 1,099,216	$ (200,785)	$ (226,710)	$ 4,728	$ 677,856

See accompanying notes to condensed consolidated financial statements.

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

	Nine months ended September 30,	
	2024	**2023**
Cash flows from operating activities:		
Net income	$ 23,767	$ 41,225
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	56,225	51,920
Amortization	10,559	10,536
Amortization of deferred financing costs and original issue discount	1,320	1,548
Debt extinguishment costs	90	—
Foreign currency exchange loss (gain)	531	(41)
Deferred income tax benefit	(4,450)	(1,011)
Net loss on asset disposals	832	3,326
Stock compensation	10,460	12,547
Equity in net income from affiliated companies	(2,543)	(16,305)
Dividends received from affiliated companies	33,000	10,000
Other, net	(7,859)	(5,270)
Working capital changes that provided (used) cash:		
Receivables	7,588	(8,939)
Inventories	(7,404)	(3,909)
Prepaids and other current assets	(8,266)	856
Accounts payable	(5,806)	(3,694)
Accrued liabilities	(1,649)	(19,383)
Net cash provided by operating activities	106,395	73,406
Cash flows from investing activities:		
Purchases of property, plant and equipment	(51,725)	(53,642)
Investment in non-marketable equity securities	(4,500)	—
Net cash used in investing activities	(56,225)	(53,642)
Cash flows from financing activities:		
Draw down of revolving credit facilities	—	14,500
Repayments of revolving credit facilities	—	(14,500)
Issuance of long-term debt, net of original issue discount and financing fees	870,817	—
Repayments of long-term debt	(877,500)	(6,750)
Repurchases of common shares	(5,010)	(78,717)
Tax withholdings on equity award vesting	(1,218)	(3,372)
Repayment of financing obligation	(2,354)	(2,087)
Other, net	153	457
Net cash used in financing activities	(15,112)	(90,469)
Effect of exchange rate changes on cash and cash equivalents	51	(1,898)
Net change in cash and cash equivalents	35,109	(72,603)
Cash and cash equivalents at beginning of period	88,365	110,920
Cash and cash equivalents at end of period	$ 123,474	$ 38,317

For supplemental cash flow disclosures, see Note 20.

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 advanced materials, specialty catalysts and services. The Company supports customers globally through its strategically located network of manufacturing facilities. The Company believes that its products and services contribute to improving the sustainability of the environment.

The Company has two uniquely positioned specialty businesses: Ecoservices provides sulfuric acid recycling to the North American refining industry for the production of alkylate and provides high quality and high strength virgin sulfuric acid for industrial and mining applications. Ecoservices also provides chemical waste handling and treatment services, as well as ex-situ catalyst activation services for the refining and petrochemical industry. Advanced Materials & Catalysts, through its Advanced Silicas business, provides finished silica catalysts, catalyst supports and functionalized silicas necessary to produce high performing plastics and to enable sustainable chemistry, and through the Zeolyst Joint Venture, innovates and supplies specialty zeolites used in catalysts that support the production of sustainable fuels, remove nitrogen oxides from diesel engine emissions and that are broadly applied in refining and petrochemical processes.

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

Basis of Presentation

The condensed consolidated financial statements included herein are unaudited. Certain information and footnote disclosures normally included in annual financial statements prepared in accordance with accounting principles generally accepted in the United States ("GAAP") have been condensed or omitted pursuant to such rules and regulations for interim reporting. In the opinion of management, all adjustments of a normal and recurring nature necessary to state fairly the financial position and results of operations have been included. The results of operations are not necessarily indicative of the expected results for the full year. The accompanying unaudited condensed consolidated financial statements should be read in conjunction with the audited consolidated financial statements and related notes included in the Company's Annual Report on Form 10-K for the year ended December 31, 2023.

2. New Accounting Standards:

Accounting Standards Not Yet Adopted

In November 2023, the Financial Accounting Standards Board ("FASB") issued guidance to improve the disclosures related to public business entities reportable segments. This new guidance requires entities to provide information regarding significant segment expenses, especially those segment expenses that are regularly reported to the Company's chief operating decision maker ("CODM," or the Company's Chief Executive Officer). The guidance also require public entities to disclose the nature, type and amounts of other segment items by reportable segment. Public business entities will also have to report all annual disclosures about segments profits or losses that are required by ASC 280 on an interim basis, including the significant segment expenses and other segment items. The new guidance is effective for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024, with early adoption permitted. The disclosure will be implemented as required for the fiscal year ended December 31, 2024. The Company is currently evaluating the impact of this guidance and expects to include additional disclosures. The Company does not believe that the new guidance will have a material impact on its balance sheets or statements of income.

In December 2023, FASB issued guidance to improve disclosures related to incomes taxes. This new guidance requires public business entities to disaggregate information on the effective tax rate reconciliation and income taxes paid to provide greater transparency. Public business entities will be required to provide additional information in specified categories related to effective tax rate reconciliation in tabular form and provide income taxes paid by jurisdictions, with further disaggregation needed if amounts exceed 5% of the total. The new guidance is effective for fiscal years beginning after December 15, 2024. The disclosure will be implemented as required for the fiscal year ended December 31, 2025. The Company is currently evaluating the impact of this guidance.

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
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In October 2023, FASB issued guidance to amend either presentation or disclosure requirements related to fourteen subtopics in the FASB Accounting Standards Codification that are currently in the SEC Regulation S-X or Regulation S-K. The new guidance was issued in response to the SEC's ruling on disclosure simplification. For entities subject to existing SEC disclosure requirements, the effective date of each amendment of the topics will be the date that the SEC removes the related disclosure from Regulation S-X or Regulation S-K. The guidance must be applied prospectively, with no early adoption permitted for entities subject to those existing SEC disclosures. The Company is currently evaluating the impact of the new guidance as it pertains to the fourteen subtopics that would impact the business and will apply prospectively once in effect.

In August 2023, the FASB issued guidance for entities that meet the definition of a joint venture or a corporate joint venture, to adopt a new basis of accounting upon the formation of the joint venture. The new guidance requires the initial measurement of contributed net assets and liabilities at fair value on the formation date, recognition of goodwill for the difference between the fair value of the joint venture's equity and net assets, and disclosures about the nature and financial impact of the transaction. The new guidance requires prospective application and is effective for all joint ventures that are formed on or after January 1, 2025, with early adoption permitted. Joint ventures that formed before January 1, 2025 may elect to retrospectively apply the new guidance. The Company will apply the guidance to any new joint ventures formed after the effective date.

3. Revenue from Contracts with Customers:

Disaggregated Revenue

The Company's primary means of disaggregating revenues is by reportable segments, which can be found in Note 17 to these condensed consolidated financial statements.

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

Key End Uses	Key Products
Clean fuels, emission control & other	• Refining hydrocracking catalysts
	• Emission control catalysts
	• Catalyst supports used in production of sustainable fuels such as renewable diesel
	• Catalysts used in production of sustainable aviation fuels
	• Catalyst activation
	• Aluminum sulfate solution
	• Ammonium bisulfite solution
Polyethylene, polymers & engineered plastics	• Catalysts and catalyst supports for high-density polyethylene and chemicals syntheses
	• Antiblock for film packaging
	• Catalyst for advanced recycling
Regeneration and treatment services	• Sulfuric acid regeneration services
	• Hazardous waste treatment services
Industrial, mining & automotive	• Virgin sulfuric acid for mining
	• Virgin sulfuric derivatives for industrial production
	• Virgin sulfuric derivatives for nylon production

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 uses, for the three and nine months ended September 30, 2024 and 2023, respectively:

	Three months ended September 30, 2024		
	Ecoservices	Advanced Materials & Catalysts[(2)]	Total
Clean fuels, emission control & other	$ 9,539	$ —	$ 9,539
Polyethylene, polymers & engineered plastics	—	25,308	25,308
Regeneration and treatment services[(1)]	91,037	—	91,037
Industrial, mining & automotive	53,291	—	53,291
Total segment sales	$ 153,867	$ 25,308	$ 179,175

	Three months ended September 30, 2023		
	Ecoservices	Advanced Materials & Catalysts[(2)]	Total
Clean fuels, emission control & other	$ 8,393	$ —	$ 8,393
Polyethylene, polymers & engineered plastics	—	25,697	25,697
Regeneration and treatment services[(1)]	87,692	—	87,692
Industrial, mining & automotive	51,544	—	51,544
Total segment sales	$ 147,629	$ 25,697	$ 173,326

	Nine months ended September 30, 2024		
	Ecoservices	Advanced Materials & Catalyst[(2)]	Total
Clean fuels, emission control & other	$ 25,542	$ —	$ 25,542
Polyethylene, polymers & engineered plastics	—	73,104	73,104
Regeneration and treatment services[(1)]	269,721	—	269,721
Industrial, mining & automotive	154,165	—	154,165
Total segment sales	$ 449,428	$ 73,104	$ 522,532

	Nine months ended September 30, 2023		
	Ecoservices	Advanced Materials & Catalyst[(2)]	Total
Clean fuels, emission control & other	$ 21,559	$ —	$ 21,559
Polyethylene, polymers & engineered plastics	—	74,877	74,877
Regeneration and treatment services[(1)]	274,529	—	274,529
Industrial, mining & automotive	147,345	—	147,345
Total segment sales	$ 443,433	$ 74,877	$ 518,310

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

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

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
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4. Fair Value Measurements:

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

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

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

Fair value on a recurring basis

The following tables present information about the Company's assets and liabilities that were measured at fair value on a recurring basis as of September 30, 2024 and December 31, 2023, and indicates the fair value hierarchy of the valuation techniques the Company utilized to determine such fair value.

	September 30, 2024	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Derivative assets:				
Interest rate caps (Note 12)	$ 7,005	$ —	$ 7,005	$ —
Derivative liabilities:				
Interest rate caps (Note 12)	$ 3,279	$ —	$ 3,279	$ —

	December 31, 2023	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Derivative assets:				
Interest rate caps (Note 12)	$ 19,021	$ —	$ 19,021	$ —
Derivative liabilities:				
Interest rate caps (Note 12)	$ 2,496	$ —	$ 2,496	$ —

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 September 30, 2024, 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.

Fair value on a non-recurring basis

Non-marketable equity securities

The Company's non-marketable equity securities consist of an investment in a privately-held company without readily determinable market values. Non-marketable equity securities are accounted for using the measurement alternative, defined as cost less impairment, if any, plus or minus adjustments from observable price changes for identical or similar securities of the same issuer. Adjustments to fair value or impairments, if any, are recorded in the condensed consolidated statements of income.

On July 24, 2024, the Company paid $4,500 for a minority equity investment in Pajarito Powder LLC ("Pajarito"), an innovative materials science company that focuses on supports and catalysts required for the manufacture and operation of electrolyzers and fuel cells. The investment is recorded in other long-term assets in the condensed consolidated balance sheet and within cash flows from investing activities in the condensed consolidated statements of cash flows.

As of September 30, 2024, the carrying value in Pajarito was $4,500. There were no remeasurement events or recognized gains or losses for the three and nine months ended September 30, 2024, respectively.

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

5. Stockholders' Equity:

Accumulated Other Comprehensive Income (Loss)

The following tables present the tax effects of each component of other comprehensive loss for the three and nine months ended September 30, 2024 and 2023, respectively:

	Three months ended September 30,					
	2024			2023		
	Pre-tax amount	Tax benefit/ (expense)	After-tax amount	Pre-tax amount	Tax benefit/ (expense)	After-tax amount
Defined benefit and other postretirement plans:						
Net gain (loss)	$ 11	$ (3)	$ 8	$ (253)	$ 63	$ (190)
Net prior service cost	(7)	2	(5)	(31)	8	(23)
Benefit plans, net	4	(1)	3	(284)	71	(213)
Net (loss) gain from hedging activities	(15,539)	3,885	(11,654)	1,247	(119)	1,128
Foreign currency translation	6,403	—	6,403	(3,112)	—	(3,112)
Other comprehensive loss	$ (9,132)	$ 3,884	$ (5,248)	$ (2,149)	$ (48)	$ (2,197)

	Nine months ended September 30,					
	2024			2023		
	Pre-tax amount	Tax benefit/ (expense)	After-tax amount	Pre-tax amount	Tax benefit/ (expense)	After-tax amount
Defined benefit and other postretirement plans:						
Net gain	$ 724	$ (181)	$ 543	$ 398	$ (99)	$ 299
Net prior service cost	(22)	6	(16)	(94)	23	(71)
Benefit plans, net	702	(175)	527	304	(76)	228
Net loss from hedging activities	(11,820)	2,955	(8,865)	(1,998)	605	(1,393)
Foreign currency translation	4,040	—	4,040	(99)	—	(99)
Other comprehensive loss	$ (7,078)	$ 2,780	$ (4,298)	$ (1,793)	$ 529	$ (1,264)

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

The following tables present the changes in accumulated other comprehensive income (loss), net of tax, by component for the nine months ended September 30, 2024 and 2023, respectively:

	Defined benefit and other postretirement plans	Net gain (loss) from hedging activities	Foreign currency translation	Total
December 31, 2023	$ 612	$ 12,546	$ (14,116)	$ (958)
Other comprehensive income before reclassifications	549	1,657	4,040	6,246
Amounts reclassified from accumulated other comprehensive loss[1]	(22)	(10,522)	—	(10,544)
Net current period other comprehensive income (loss)	527	(8,865)	4,040	(4,298)
September 30, 2024	$ 1,139	$ 3,681	$ (10,076)	$ (5,256)
December 31, 2022	$ (508)	$ 24,672	$ (18,172)	$ 5,992
Other comprehensive income (loss) before reclassifications	207	12,057	(99)	12,165
Amounts reclassified from accumulated other comprehensive income (loss)[1]	21	(13,450)	—	(13,429)
Net current period other comprehensive income (loss)	228	(1,393)	(99)	(1,264)
September 30, 2023	$ (280)	$ 23,279	$ (18,271)	$ 4,728

[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 (loss) for the three and nine months ended September 30, 2024 and 2023, respectively:

Details about Accumulated Other Comprehensive Income Components	Amounts reclassified from Accumulated Other Comprehensive Loss (Income)[1]				Affected line item where Income is presented
	Three months ended September 30,		Nine months ended September 30,		
	2024	2023	2024	2023	
Amortization of defined benefit and other postretirement items:					
Net loss	$ —	$ 21	$ 7	$ 48	Other (expense) income[2]
Net prior service cost (credit)	7	(31)	22	(94)	Other (expense) income[2]
	7	(10)	29	(46)	Total before tax
	(2)	7	(7)	25	Tax (expense) benefit
	$ 5	$ (3)	$ 22	$ (21)	Net of tax
Gains and losses on cash flow hedges:					
Interest rate caps	$ 4,711	$ 6,048	$ 14,029	$ 17,933	Interest income (expense)
	(1,177)	(1,511)	(3,507)	(4,483)	Tax expense
	$ 3,534	$ 4,537	$ 10,522	$ 13,450	Net of tax
Total reclassifications for the period	$ 3,539	$ 4,534	$ 10,544	$ 13,429	Net of tax

[1] Amounts in parentheses indicate debits to profit/loss.

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

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

Treasury Stock Repurchases

2022 Stock Repurchase Program

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

During the nine months ended September 30, 2024, the Company repurchased 552,081 shares on the open market at an average price of $9.05 per share, for a total of $4,998, excluding brokerage commissions and accrued excise tax. As of September 30, 2024, $229,594 was available for share repurchases under the program. During the nine months ended September 30, 2024, the Company did not need to accrue excise tax related to these repurchases, net of shares issued under the Company's equity incentive program (see Note 18 to these condensed consolidated financial statements).

During the nine months ended September 30, 2023, the Company repurchased 541,494 shares on the open market at an average price of $9.85 per share, for a total of $5,333, excluding brokerage commissions and accrued excise tax. Additionally, in connection with secondary offerings of the Company's common stock by an equity sponsor in March and May 2023, the Company repurchased 7,000,000 shares of its common stock sold in the offerings from the underwriters at a weighted average price of $10.48 per share concurrently with the closing of the offerings, for a total of $73,374, excluding accrued excise tax. During the nine months ended September 30, 2023, the Company accrued excise tax of $638 related to these repurchases, net of shares issued under the Company's equity incentive program. This amount was included in accrued liabilities in the condensed consolidated balance sheet and is treated by the Company as a cost of the treasury stock transactions in equity.

Tax Withholdings on Equity Award Vesting

In connection with the vesting of restricted stock awards ("RSA" or "RSAs"), restricted stock units ("RSU" or "RSUs") and performance stock units ("PSU" or "PSUs"), 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 128,801 and 315,635 shares delivered to the Company to cover tax payments for the nine months ended September 30, 2024 and 2023, respectively and the fair value of those shares withheld were $1,218 and $3,372 for the nine months ended September 30, 2024 and 2023, respectively.

6. Goodwill:

The change in the carrying amount of goodwill for the nine months ended September 30, 2024 is summarized as follows:

	Ecoservices	Advanced Materials & Catalysts	Total
Balance as of December 31, 2023	$ 326,589	$ 77,881	$ 404,470
Foreign exchange impact	—	1,322	1,322
Balance as of September 30, 2024	$ 326,589	$ 79,203	$ 405,792

The Company completes its annual goodwill and indefinite-lived intangible assets impairment test during the fourth quarter of each year, or more frequently if triggering events indicate a possible impairment. The Company determined the fair value of its reporting units using both a market approach and an income, or discounted cash flow, approach. As of October 1, 2023, the date of the Company's most recent quantitative assessments, the fair values of each of the Company's reporting units and the fair values of the Company's indefinite-lived trade names and trademarks exceeded their respective carrying values.

During the nine months ended September 30, 2024, the Company did not identify any events or circumstances that would more likely than not reduce the fair value of the Company's reporting units below their respective carrying values.

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

Although the estimated fair value of the Advanced Materials & Catalysts reporting unit exceeded its carrying value on October 1, 2023 by over30%, the Company has experienced unfavorable effects on current operations resulting from certain macroeconomic and industry factors in specific end uses during the nine months ended September 30, 2024. Prolonged unfavorable effects could adversely impact the estimated fair value of the Advanced Materials & Catalysts reporting unit in future periods and may result in impairment charges.

7. Other Operating Expense, Net:

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

	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Amortization expense	$ 2,650	$ 2,645	$ 7,939	$ 7,924
Transaction and other related costs	—	187	198	2,811
Restructuring, integration and business optimization costs	535	310	920	2,438
Net loss on asset disposals	218	1,020	832	3,326
Other, net	(191)	148	98	789
	$ 3,212	$ 4,310	$ 9,987	$ 17,288

8. Inventories, Net:

Inventories, net are classified and valued as follows:

	September 30, 2024	December 31, 2023
Finished products and work in process	$ 50,400	$ 41,658
Raw materials	3,309	3,457
	$ 53,709	$ 45,115
Valued at lower of cost or market:		
LIFO basis	$ 31,463	$ 24,815
Valued at lower of cost and net realizable value:		
FIFO or average cost basis	22,246	20,300
	$ 53,709	$ 45,115

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

9. Investments in Affiliated Companies:

The Company accounts for investments in affiliated companies under the equity method.Affiliated companies accounted for on the equity basis as of September 30, 2024 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 September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Sales	$ 76,568	$ 81,115	$ 204,073	$ 236,200
Gross profit	9,200	22,205	43,129	66,776
Operating (loss) income	(1,608)	12,414	10,976	39,916
Net (loss) income	(623)	12,617	11,387	42,189

(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 September 30, 2024 and December 31, 2023 includes net purchase accounting fair value adjustments of $221,463 and $224,614, 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 $610 and $3,151 of amortization expense related to purchase accounting fair value adjustments for the three and nine months ended September 30, 2024, respectively. Consolidated equity in net income from affiliates is net of $1,601 and $4,802 of amortization expense related to purchase accounting fair value adjustments for the three and nine months ended September 30, 2023, respectively.

The Company had receivables due from affiliates of $2,802 and $3,231 as of September 30, 2024 and December 31, 2023, respectively, which were included in prepaid and other current assets in the condensed consolidated balance sheets. The Company had payables to affiliates of $2,939 and $1,351 as of September 30, 2024 and December 31, 2023 respectively, which were included in accrued liabilities in the condensed consolidated balance sheets. Receivables and payables due from/to affiliates are generally non-trade.

The Company had no sales to affiliates for the three months ended September 30, 2024 and 2023, respectively and sales to affiliates of $1,110 and $2,457 for the nine months ended September 30, 2024 and 2023, respectively. There were no purchases from affiliates for the three and nine months ended September 30, 2024, respectively and purchases from affiliates were $236 for the three and nine months ended September 30, 2023, respectively.

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

10. Property, Plant and Equipment:

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

	September 30, 2024	December 31, 2023
Land	$ 97,413	$ 96,833
Buildings and improvements	92,078	84,860
Machinery and equipment	865,112	820,509
Construction in progress	39,715	42,000
	1,094,318	1,044,202
Less: accumulated depreciation	(522,597)	(467,298)
	$ 571,721	$ 576,904

Depreciation expense was $19,702 and $56,225 for the three and nine months ended September 30, 2024, respectively. Depreciation expense was $17,773 and $51,920 for the three and nine months ended September 30, 2023, respectively.

11. Long-term Debt:

The summary of long-term debt is as follows:

	September 30, 2024	December 31, 2023
2024 Term Loan Facility	$ 873,000	$ 877,500
ABL Facility	—	—
Total debt	873,000	877,500
Original issue discount	(7,432)	(6,162)
Deferred financing costs	(2,896)	(3,392)
Total debt, net of original issue discount and deferred financing costs	862,672	867,946
Less: current portion	(8,730)	(9,000)
Total long-term debt, excluding current portion	$ 853,942	$ 858,946

Term Loan Facility

In June 2024, the Company amended its Term Loan Credit Agreement dated as of June 9, 2021 to, among other things, (a) reduce the interest rate applicable to all outstanding Secured Overnight Financing Rate (“SOFR”) term loans to term SOFR plus 2.25% per annum from a maximum of adjusted term SOFR plus 2.75% per annum, (b) reduce the interest rate applicable to all outstanding base rate term loans to the alternate base rate plus 1.25% per annum from a maximum of the alternate base rate plus 1.75% per annum and (c) extend the maturity date of all outstanding term loans to June 12, 2031 (the amended term loans, the “2024 Term Loan Facility”). As a result of the amendment, there is no longer a credit spread adjustment of 10 basis points.

The interest rate on the 2024 Term Loan Facility was 7.50% as of September 30, 2024.

Debt extinguishment costs resulting from Term Loan amendments

The Company evaluated the terms of the amendment in accordance with *ASC 470-50 Debt - Modification and Extinguishment* and determined that the amendment was primarily a modification of debt. As a result, the Company recorded $4,471 of third-party financing costs as debt extinguishment costs in the condensed consolidated income statement for the nine months ended September 30, 2024 and capitalized $2,183 of original issued discount within long-term debt, excluding current portion in the condensed consolidated balance sheets as of September 30, 2024. In addition, previously unamortized deferred financing costs of $30 and original issue discount of $59 associated with the previous outstanding debt were written off as debt extinguishment costs for the nine months ended September 30, 2024.

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

ABL Facility

The borrowings under the senior secured asset-based lending revolving credit facility ("ABL Facility") bear interest at a rate equal to an adjusted term SOFR, which includes a credit spread adjustment of 10 basis points or the base rate plus a margin of between 1.25% to 1.75% or 0.25% to 0.75%, respectively. The interest rate on the ABL Facility was 8.25% as of September 30, 2024.

Fair Value of Debt

The fair value of a financial instrument is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants. As of September 30, 2024 and December 31, 2023, the fair value of the Company's term loan facility was $867,544 and $876,403, respectively. The fair value is classified as Level 2 based upon the fair value hierarchy (see Note 4 to these condensed consolidated financial statements for further information on fair value measurements).

12. Financial Instruments:

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

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

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

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

The following table provides a summary of the Company's interest rate cap agreements:

Financial instrument	Number of instruments	In effect as of September 30, 2024	Current notional amount of instruments in effect	Annuitized premium of instruments in effect	Cap rate in effect for all agreements at September 30, 2024
Interest rate cap	5	3	$ 675,000	$ 24,817	1.00 %

The current notional amounts of the three interest rate cap agreements in effect at September 30, 2024 are $250,000, $250,000 and $175,000. The Company entered into a $250,000 interest rate cap to mitigate interest rate volatility from August 2022 to October 2024, a $250,000 interest rate cap agreement to mitigate interest rate volatility from September 2023 to October 2025 and a $175,000 interest rate cap agreement to mitigate interest rate volatility from August 2024 to July 2026. The Company had a $150,000 interest rate cap agreement to mitigate interest rate volatility from August 2023 to July 2024.

The Company also entered into two forward starting interest rate cap agreements to mitigate interest volatility from November 2024 to October 2026 and July 2026 to July 2028.

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

In February 2023, the Company amended all existing interest rate cap agreements to replace LIBOR with SOFR as the benchmark interest rate, with all other terms of the agreements remaining the same. This amendment changed the previously annuitized premiums on the existing interest rate cap agreements.

The fair values of derivative instruments held as of September 30, 2024 and December 31, 2023, respectively are shown below:

	Balance sheet location	September 30, 2024	December 31, 2023
Derivative assets			
Derivatives designated as cash flow hedges:			
Interest rate caps	Prepaid and other current assets	$ 6,192	$ 13,419
Interest rate caps	Other long-term assets	813	5,602
Total derivative assets		$ 7,005	$ 19,021
Derivative liabilities			
Derivatives designated as cash flow hedges:			
Interest rate caps	Accrued liabilities	$ 528	$ —
Interest rate caps	Other long-term liabilities	2,751	2,496
Total derivative liabilities		$ 3,279	$ 2,496

The following tables show the effect of the Company's derivative instruments designated as cash flow hedges on AOCI for the three and nine months ended September 30, 2024 and 2023, respectively:

		Three months ended September 30,			
		2024		2023	
	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	$ (10,828)	$ (4,711)	$ 7,294	$ (6,048)

		Nine months ended September 30,			
		2024		2023	
	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	$ 2,209	$ (14,029)	$ 15,935	$ (17,933)

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

The following table shows the effect of the Company's cash flow hedge accounting on the condensed consolidated statements of income for the three and nine months ended September 30, 2024 and 2023, respectively:

	Location and amount of gain (loss) recognized in income on cash flow hedging relationships			
	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Total amounts of income and expense line items presented in the statement of income in which the effects of cash flow hedges are recorded in interest (expense) income	$ (11,305)	$ (11,811)	$ (37,609)	$ (30,812)
The effects of cash flow hedging:				
Gain (loss) on cash flow hedging relationships:				
Interest contracts:				
Amount reclassified from AOCI into income	4,711	6,048	14,029	17,933

The amount of net unrealized gains 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 $5,456 as of September 30, 2024.

13. Income Taxes:

The effective income tax rate for the three months ended September 30, 2024 was 24.0%, compared to 32.3% for the three months ended September 30, 2023. The effective income tax rate for the nine months ended September 30, 2024 was 26.9%, compared to 29.9% for the nine months ended September 30, 2023. The Company's effective income tax rates for the three and nine months ended September 30, 2024 and 2023, respectively, fluctuated primarily due to a reduced discrete tax impact relative to pre-tax book income. The discrete tax items relate to a stock compensation shortfall, tax expense associated with the recording of accrued penalties and interest on historical uncertain tax positions and a tax benefit related to state tax refunds associated with prior tax years recorded during the current quarter.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the nine months ended September 30, 2024 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation and a discrete tax expense associated with the recording of accrued penalties and interest on historical uncertain tax positions.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the nine months ended September 30, 2023 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation, a discrete tax expense associated with the recording of accrued penalties and interest associated with historical uncertain tax positions and a discrete tax benefit connected to state and local tax law changes.

During the fourth quarter of 2024, the Company expects to recognize $8,023 of previously net unrecognized tax benefits, excluding interest and penalties, primarily due to the expiration of statutes of limitations during October 2024.

14. Benefit Plans:

The following tables present the components of net periodic (benefit) expense 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 September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Interest cost	$ 807	$ 863	$ 2,421	$ 2,590
Expected return on plan assets	(837)	(826)	(2,511)	(2,479)
Settlement loss (gain)	—	22	(6)	50
Net periodic (benefit) expense	$ (30)	$ 59	$ (96)	$ 161

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

Other Postretirement Benefit Plan

	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Interest cost	$ 6	$ 6	$ 18	$ 18
Amortization of prior service credit	(7)	(31)	(22)	(94)
Amortization of net gain	—	(1)	(1)	(2)
Net periodic benefit	$ (1)	$ (26)	$ (5)	$ (78)

All components of net periodic (benefit) expense other than service cost are presented within other expense (income), net in the Company's condensed consolidated statements of income.

15. Commitments and Contingent Liabilities:

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

16. Related Party Transactions:

The Company maintains certain policies and procedures for the review, approval and ratification of related party transactions to ensure that all transactions with selected parties are fair, reasonable and in the Company's best interests. All significant relationships and transactions are separately identified by management if they meet the definition of a related party or a related party transaction. Related party transactions include transactions that occurred during the year, or are currently proposed, in which the Company was or will be a participant, and for which any related person had or will have a direct or indirect material interest. All related party transactions are reviewed, approved and documented by the appropriate level of the Company's management in accordance with these policies and procedures.

Joint Venture Agreement

The Company entered into a joint venture agreement (the "ZI Partnership Agreement") in 1988 with Shell Catalysts & Technologies, an affiliate of Royal Dutch Shell plc, to form Zeolyst International, a 50/50 joint venture partnership (the "Partnership"). Under the terms of the ZI Partnership Agreement, the Partnership leases certain land used in its Kansas City production facilities from Ecovyst. This lease, which has been recorded as an operating lease, provided for rental payments to the Company of $77 and $232 for the three and nine months ended September 30, 2024 and 2023, respectively. The terms of this lease are evergreen as long as the ZI Partnership Agreement is in place. The Partnership had no sales to the Company for the three and nine months ended September 30, 2024, respectively and sales to the Company were $236 for the three and nine months ended September 30, 2023, respectively.

The Partnership purchases certain raw materials from the Company and was charged for various manufacturing costs incurred at the Company's Kansas City production facility. The amount of these costs charged to the Partnership were $3,553 and $13,637 for the three and nine months ended September 30, 2024, respectively and $4,266 and $15,135 for the three and nine months ended September 30, 2023, respectively.

Certain administrative, marketing, engineering, management-related and research and development services are provided to the Partnership by the Company. The Partnership was charged $4,132 and $13,032 for the three and nine months ended September 30, 2024, respectively and $3,625 and $10,877 for the three and nine months ended September 30, 2023, respectively, for these services.

In addition, the Partnership was charged certain product demonstration costs of $379 and $974 for the three and nine months ended September 30, 2024, respectively and $490 and $1,418 for the three and nine months ended September 30, 2023, respectively. These charges to the Partnership are recorded as reductions in either cost of goods sold or selling, general and administrative expenses in the condensed consolidated statements of income, depending on the nature of the expenditures.

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

The Company had an accounts receivable from the Partnership of $2,791 and $3,164 as of September 30, 2024 and December 31, 2023, respectively. Accounts payable to the Partnership was immaterial as of September 30, 2024. There were no accounts payable with the Partnership as of December 31, 2023.

17. Reportable Segments:

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

	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Sales:				
Ecoservices	$ 153,867	$ 147,629	$ 449,428	$ 443,433
Advanced Materials & Catalysts[1]	25,308	25,697	73,104	74,877
Total	$ 179,175	$ 173,326	$ 522,532	$ 518,310
Adjusted EBITDA:[2]				
Ecoservices	$ 55,098	$ 54,674	$ 146,301	$ 151,598
Advanced Materials & Catalysts[3]	10,929	16,360	36,775	54,718
Adjusted EBITDA from reportable segments	$ 66,027	$ 71,034	$ 183,076	$ 206,316

(1) Excludes the Company's proportionate share of sales from the Zeolyst Joint Venture accounted for using the equity method (see Note 9 to these condensed consolidated financial statements for further information). The proportionate share of sales excluded is $30,908 and $83,413 for the three and nine months ended September 30, 2024, respectively. The proportionate share of sales excluded is $36,958 and $103,721 for the three and nine months ended September 30, 2023, 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 for the Company's Advanced Materials & Catalysts segment includes the Company's 50% portion of the Adjusted EBITDA from the Zeolyst Joint Venture. For the three months ended September 30, 2024, the Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $3,281, which includes $922 of equity in net loss plus $610 of amortization of investment in affiliate step-up and $3,593 of joint venture depreciation, amortization and interest. For the nine months ended September 30, 2024, the Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $15,767, which includes $2,543 of equity in net income plus $3,151 of amortization of investment in affiliate step-up and $10,073 of joint venture depreciation, amortization and interest.

For the three months ended September 30, 2023, the Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $9,640, which includes $4,748 of equity in net income plus $1,601 of amortization of investment in affiliate step-up and $3,291 of joint venture depreciation, amortization and interest. For the nine months ended September 30, 2023, the Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $31,270, which includes $16,356 of equity in net income plus $4,802 of amortization of investment in affiliate step-up and $10,112 of joint venture depreciation, amortization and interest.

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

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

	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Reconciliation of income before income taxes to Adjusted EBITDA from reportable segments				
Income before income taxes	$ 18,748	$ 24,465	$ 32,523	$ 58,850
Interest expense, net	11,305	11,811	37,609	30,812
Depreciation and amortization	23,227	21,290	66,784	62,456
Unallocated corporate expenses	6,224	3,163	20,836	16,243
Joint venture depreciation, amortization and interest	3,593	3,292	10,073	10,112
Amortization of investment in affiliate step-up	610	1,601	3,151	4,802
Debt extinguishment costs	—	—	4,560	—
Net loss on asset disposals	218	1,020	832	3,326
Foreign exchange (gain) loss	(1)	774	78	(362)
LIFO (benefit) expense	(552)	—	(3,223)	2,510
Transaction and other related costs	—	187	198	2,811
Equity-based compensation	2,952	3,477	10,460	12,547
Restructuring, integration and business optimization expenses	535	310	920	2,438
Other	(832)	(356)	(1,725)	(229)
Adjusted EBITDA from reportable segments	$ 66,027	$ 71,034	$ 183,076	$ 206,316

Capital expenditures for the Company’s reportable segments are shown in the following table:

	Nine months ended September 30,	
	2024	2023
Capital expenditures:		
Ecoservices	$ 42,107	$ 44,033
Advanced Materials & Catalysts[(1)]	7,824	3,631
Corporate[(2)]	1,794	5,978
Capital expenditures per the condensed consolidated statements of cash flows	$ 51,725	$ 53,642

(1) Excludes the Company’s proportionate share of capital expenditures from the Zeolyst Joint Venture.

(2) Includes corporate capital expenditures, the cash impact from changes in capital expenditures in accounts payable and capitalized interest.

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
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18. 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 September 30, 2024, 8,081,073 shares of common stock were available for issuance under the plan. The Company settles these awards through the issuance of treasury shares under its equity incentive plan.

RSU

During the nine months ended September 30, 2024, the Company granted 1,126,166 RSUs under its equity incentive plan. Each RSU 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 nine months ended September 30, 2024, generally requires approximately one year of service for members of the Company's board of directors and approximately three years of service for employees. The value of the RSUs granted during the nine months ended September 30, 2024 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 RSUs is recognized on a straight-line basis over the respective vesting period.

PSU

2024 Grants

During the nine months ended September 30, 2024, the Company granted 535,629 PSUs (at target) under its equity incentive plan. The PSUs granted during the nine months ended September 30, 2024 provide the recipients with the right to receive shares of common stock dependent on 50% of a Company-specific financial performance target and 50% on the relative increase in the total shareholder return ("TSR") goal ("the Performance measures"). The Performance measures are measured independently of each other, but achievement of both metrics is measured on the same three-year performance period from January 1, 2024 through December 31, 2026 ("Performance period"). Depending on the Company's performance relative to the Performance measures, each PSU award recipient is eligible to receive a percentage of the target number of shares granted to the recipient, ranging from zero to 200%. The PSUs, to the extent earned, will vest on the date the Compensation Committee of the Company's Board of Directors ("Compensation Committee") certifies the achievement of the Performance measures for the Performance period, 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, 2026.

Achievement of the Company-specific financial performance target is measured based on the actual three-year cumulative results across the Performance period. The TSR goal is based on the Company's actual TSR performance against companies in the S&P 1500 Specialty Chemicals Index over the Performance period. The TSR goal, which determines how much of the 50% of the PSUs granted during 2024 may be earned, 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 $11.64 weighted average fair value of the awards granted, subject to the TSR goal during the nine months ended September 30, 2024, with the following weighted average assumptions:

Expected dividend yield	— %
Risk-free interest rate	4.09 %
Expected volatility	39.45 %
Expected term (in years)	2.95

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

2021 Grants

In February 2024, the Compensation Committee certified the achievement of the performance metrics for thethree-year period ended December 31, 2023, related to the PSUs granted during the year ended December 31, 2021. The PSUs granted during the year ended December 31, 2021 provide the recipients with the right to receive shares of common stock dependent on the achievement of a TSR goal and are generally subject to the provision of service through the vesting date of the award. The TSR goal was based on the Company's actual TSR percentage increase over the performance period. The awards vested during the nine months ended September 30, 2024 with no percentage of the TSR goal earned.

Award Activity

The following table summarizes the activity for the Company's RSUs and PSUs for the nine months ended September 30, 2024:

	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, 2023	1,962,828	$ 10.55	959,217 (1)	$ 11.84
Granted	1,126,166	$ 8.84	535,629	$ 10.23
Vested	(1,000,288)	$ 11.10	—	$ —
Forfeited	(108,833)	$ 9.27	(141,437)	$ 12.82
Nonvested as of September 30, 2024	1,979,873	$ 9.37	1,353,409 (1)	$ 11.10

(1) Based on target.

During the nine months ended September 30, 2024, the Company also granted4,540 of RSAs with a weighted average grant date fair value of $8.81 per share that immediately vested. Cash proceeds received by the Company from the exercise of stock options were not material for the nine months ended September 30, 2024.

Stock-Based Compensation Expense

For the three months ended September 30, 2024 and 2023, stock-based compensation expense for the Company was $2,952 and $3,477, respectively. The associated income tax benefit based on the applicable statutory rate recognized in the condensed consolidated statements of income for the three months ended September 30, 2024 and 2023 was $724 and $826, respectively.

For the nine months ended September 30, 2024 and 2023, stock-based compensation expense for the Company was $10,460 and $12,547, respectively. The associated income tax benefit based on the applicable statutory rate recognized in the condensed consolidated statements of income for the nine months ended September 30, 2024 and 2023 was $2,565 and $2,980, respectively.

As of September 30, 2024, unrecognized compensation cost of $11,283 for RSUs and $6,341 for PSUs are considered probable of vesting and the weighted-average period over which these costs are expected to be recognized at September 30, 2024 was 1.71 years for the RSUs and1.77 years for the PSUs.

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

Basic earnings per share is calculated as income 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 RSAs 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 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 RSAs and RSUs with service vesting conditions, (2) PSUs 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 September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Weighted average shares outstanding – Basic	116,490,634	116,446,085	116,786,759	119,042,161
Dilutive effect of unvested common shares and RSUs with service conditions, PSUs considered probable of vesting and assumed stock option exercises and conversions	696,420	928,262	638,495	1,374,971
Weighted average shares outstanding – Diluted	117,187,054	117,374,347	117,425,254	120,417,132

Basic and diluted income per share are calculated as follows:

	Three months ended September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
Numerator:				
Net income	$ 14,251	$ 16,574	$ 23,767	$ 41,225
Denominator:				
Weighted average shares outstanding – Basic	116,490,634	116,446,085	116,786,759	119,042,161
Weighted average shares outstanding – Diluted	117,187,054	117,374,347	117,425,254	120,417,132
Net income per share:				
Basic income per share	$ 0.12	$ 0.14	$ 0.20	$ 0.35
Diluted income per share	$ 0.12	$ 0.14	$ 0.20	$ 0.34

ECOVYST INC. AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Dollars in thousands, except share and per share amounts)
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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 September 30,		Nine months ended September 30,	
	2024	2023	2024	2023
RSAs with performance only targets not achieved	—	—	—	65,966
Stock options with performance only targets not achieved	—	—	—	68,890
Anti-dilutive RSUs and PSUs	920,355	—	419,315	—
Anti-dilutive stock options	367,100	454,461	367,100	556,114

RSAs and stock options with performance only vesting conditions were not included in the dilution calculation, as the performance targets have not been achieved nor were probable of achievement as of the end of the respective periods. These awards and stock options were canceled on March 7, 2023 (see Note 18 to these condensed consolidated financial statements for additional information). Certain stock options to purchase shares of common stock were excluded from the computation of diluted earnings per share for the respective periods because the options' exercise price was greater than the average market price of the common shares. These stock options and anti-dilutive awards are not included in the dilution calculation, as their inclusion would have the effect of increasing diluted income per share or reducing diluted loss per share.

20. Supplemental Cash Flow Information:

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

	Nine months ended September 30,	
	2024	2023
Cash paid during the period for:		
Income taxes, net of refunds	$ 20,832	$ 19,019
Interest[(1)]	36,982	28,466
Non-cash investing activity:		
Capital expenditures acquired on account but unpaid as of the period end	2,358	589
Non-cash financing activity:		
Accrued excise tax on share repurchases (Note 5)	—	638
Right-of-use assets obtained in exchange for new lease liabilities (non-cash):		
Operating leases	8,166	8,048

(1) Cash paid for interest is shown net of capitalized interest and includes the cash received or paid on the Company's interest rate cap agreements designated as cash flow hedges for the periods presented (see Note 12 to these condensed consolidated financial statements for details).

21. Subsequent Events:

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, economic effects on our operations and financial results and our liquidity, potential strategic acquisitions or divestitures, potential increased borrowing under our credit facilities, 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 working capital requirements, capital expenditure projects, debt service requirements 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; 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, 2023 (the "Annual Report on Form 10-K").

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 advanced materials, specialty catalysts and services. We believe that our products and services contribute to improving the sustainability of the environment.

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

Ecoservices: We are a leading provider of sulfuric acid recycling to the North American refining industry 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 high quality and high strength virgin sulfuric acid for industrial and mining applications. We also provide chemical waste handling and treatment services, as well as ex-situ catalyst activation services for the refining and petrochemical industry.

Advanced Materials & Catalysts: We are a global supplier of finished silica catalyst, catalyst supports and functionalized silicas necessary to produce high performing plastics and to enable sustainable chemistry through our Advanced Silicas business. This segment also includes our 50% interest in the Zeolyst Joint Venture, where we are a leading global supplier of specialty zeolites used in catalysts that supports the production of sustainable fuels, remove nitrogen oxides from diesel engine emissions and that are broadly applied in refining and petrochemical processes.

Stock Repurchase Program

On April 27, 2022, the Board approved a stock repurchase program that authorized the Company to purchase up to $450.0 million of the Company's common stock over the four-year period from the date of approval. For the nine months ended September 30, 2024, the Company repurchased 552,081 shares on the open market at an average price of $9.05 per share, for a total of $5.0 million excluding brokerage commissions and accrued excise tax. As of September 30, 2024, $229.6 million was available for share repurchases under the program.

For the nine months ended September 30, 2023, the Company repurchased 541,494 shares on the open market at an average price of $9.85, for a total of $5.3 million, excluding brokerage commissions and accrued excise tax. Additionally, in connection with secondary offerings of the Company's common stock by an equity sponsor in March and May 2023, the Company repurchased 7,000,000 shares of its common stock in the offerings from underwriters at a weighted average price of $10.48 per share concurrently with the close of the offerings, for a total of $73.4 million, excluding accrued excise tax.

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 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 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 adjusted for (i) non-operating income or expense and (ii) the impact of certain non-cash, nonrecurring or other items included in net income 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 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

Sales in our Ecoservices and Advanced Materials & Catalysts segments are made on both a purchase order basis and pursuant to long-term contracts. Within the Zeolyst Joint Venture, included in our Advanced Materials & Catalysts segment, we may also experience demand fluctuations based upon the timing of some of our customer's fixed bed catalyst replacements or the timing of sales of catalysts used in the production of sustainable fuels.

Our Ecoservices and Advanced Materials & Catalysts segments continued to benefit from positive demand trends for our products and services in the majority of end uses we serve. For Ecoservices, strong domestic and export demand for refined products continued to support high refinery utilization rates, while more stringent gasoline standards and growing demand for premium gasoline to power higher-compression and turbo-charged engines continued to drive demand for alkylate and for our regeneration services. In addition, demand for virgin sulfuric acid across a wide range of industrial applications remained favorable. For our Advanced Materials & Catalysts segment, global polyethylene demand remained positive, supporting our sales of polyethylene catalysts and catalysts supports. Within the Zeolyst Joint Venture, hydrocracking catalyst sales continued to reflect demand fluctuations driven by customer order timing associated by the timing of fixed bed catalyst replacement cycles and sales of niche-custom catalysts, which tend to be event driven, continued to reflect variability in customer order patterns.

With a current imbalance between the production capacity for renewable diesel and current demand, we continue to expect lower demand in the near to mid-term for catalyst sales into the production of renewable diesel. In addition, given various macro-economic conditions which have adversely impacted sales of heavy-duty diesel vehicles, we reduced our expectations for sales of emission control catalysts.

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 for a nominal charge as part of their contracts. The primary raw materials used in the manufacture of products in our Advanced Materials & Catalysts segment 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, 2023 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, used in emission control, refining and petrochemical industry applications and by 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 generally 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 nine months ended September 30, 2024 and approximately 6% for the year ended December 31, 2023 were in currencies other than the U.S. dollar. Because our condensed 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 September 30, 2024 Compared to the Three Months Ended September 30, 2023

Highlights

The following is a summary of our financial performance for the three months ended September 30, 2024 compared to the three months ended September 30, 2023.

Sales

- Sales increased $5.9 million to $179.2 million. The increase in sales was primarily due tothe result of higher average selling prices for regeneration services and higher sales volume of virgin sulfuric acid.

Gross Profit

- Gross profit increased $1.5 million to $54.7 million. The increase ingross profit was primarily due to higher average selling pricing and higher sales volume, partially offset by unfavorable manufacturing costs.

Operating Income

- Operating income decreased by $0.4 million to $31.6 million. The decrease in operating income was due to higher selling, general and administrative expenses, partially offset by higher gross profit and lower other operating expenses, net.

Equity in Net Income of Affiliated Companies

- Equity in net income of affiliated companies for the three months ended September 30, 2024 was a net loss of $0.9 million, compared to net income of $4.7 million for the three months ended September 30, 2023. The decrease of $5.6 million was due to lower earnings generated by the Zeolyst Joint Venture for the three months ended September 30, 2024, driven by lower sales volume.

The following is our unaudited condensed consolidated statements of income and a summary of financial results for the three months ended September 30, 2024 and 2023:

	Three months ended September 30, 2024	Three months ended September 30, 2023	Change $	Change %
	(in millions, except percentages)			
Sales	$ 179.2	$ 173.3	$ 5.9	3.4 %
Cost of goods sold	124.5	120.1	4.4	3.7 %
Gross profit	54.7	53.2	1.5	2.8 %
Gross profit margin	*30.5 %*	*30.7 %*		
Selling, general and administrative expenses	20.0	16.9	3.1	18.3 %
Other operating expense, net	3.1	4.3	(1.2)	(27.9)%
Operating income	31.6	32.0	(0.4)	(1.3)%
Operating income margin	*17.6 %*	*18.4 %*		
Equity in net (income) from affiliated companies	0.9	(4.7)	5.6	(119.1)%
Interest expense, net	11.3	11.8	(0.5)	(4.2)%
Other expense, net	0.6	0.4	0.2	50.0 %
Income before income taxes	18.8	24.5	(5.7)	(23.3)%
Provision for income taxes	4.5	7.9	(3.4)	(43.0)%
Effective tax rate	*24.0 %*	*32.3 %*		
Net income	$ 14.3	$ 16.6	$ (2.3)	(13.9)%

Sales

	Three months ended September 30, 2024	Three months ended September 30, 2023	Change $	Change %
	(in millions, except percentages)			
Sales:				
Ecoservices	$ 153.9	$ 147.6	$ 6.3	4.3 %
Advanced Materials & Catalysts	25.3	25.7	(0.4)	(1.6) %
Total sales	$ 179.2	$ 173.3	$ 5.9	3.4 %

Ecoservices: Sales in Ecoservices for the three months ended September 30, 2024 were $153.9 million, an increase of $6.3 million, or 4.3%, compared to sales of $147.6 million for the three months ended September 30, 2023. The increase in sales was due to higher average selling prices of $3.0 million and higher sales volume of $3.3 million. The impact associated with the pass-through of lower sulfur costs was immaterial for the three months ended September 30, 2024.

Average selling prices were higher primarily due to favorable contractual pricing in regeneration services. The increase in sales volume was primarily related to the increased demand for virgin sulfuric acid.

Advanced Materials & Catalysts: Sales in Advanced Materials & Catalysts for the three months ended September 30, 2024 were $25.3 million, a decrease of $0.4 million, or 1.6%, compared to sales of $25.7 million for the three months ended September 30, 2023. The decrease of $0.4 million was primarily due to the timing of niche custom catalysts sales, partially offset by higher advanced silicas used for the production of polyethylene.

Gross Profit

Gross profit for the three months ended September 30, 2024 was $54.7 million, an increase of $1.5 million, or 2.8%, compared to $53.2 million for the three months ended September 30, 2023. The increase in gross profit was primarily due to higher average selling prices of $3.0 million, higher sales volume and mix of $3.3 million, partially offset by unfavorable manufacturing costs of $4.8 million.

Average selling prices were higher primarily due to the favorable contractual pricing in regeneration services. The increase in sales volume was primarily related to higher demand for virgin sulfuric acid and higher advanced silicas used for the production of polyethylene. Higher manufacturing costs were driven by general inflation, higher planned maintenance costs and costs associated with our manufacturing plant reliability improvement program in Ecoservices.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the three months ended September 30, 2024 were $20.0 million, an increase of $3.1 million, compared to $16.9 million for the three months ended September 30, 2023. The increase in selling, general and administrative expenses was primarily due to an increase in other compensation-related expenses of $3.7 million, offset by a decrease of $0.5 million in stock compensation due to fewer overall awards granted and outstanding for the three months ended September 30, 2024.

Other Operating Expense, Net

Other operating expense, net for the three months ended September 30, 2024 was $3.1 million, a decrease of $1.2 million, compared to $4.3 million for the three months ended September 30, 2023. The decrease in other operating expense, net was primarily due to a decrease in net loss from asset disposals of $0.8 million compared to the prior year.

Equity in Net Income of Affiliated Companies

Equity in net income of affiliated companies for the three months ended September 30, 2024 was a net loss of $0.9 million, compared to net income of $4.7 million for the three months ended September 30, 2023. The decrease was due to $5.6 million of lower earnings from the Zeolyst Joint Venture during the three months ended September 30, 2024, as compared to the three months ended September 30, 2023. The decrease in earnings from the Zeolyst Joint Venture was due to lower sales volume of catalysts used in the production of sustainable fuels and emission control applications, partially offset by higher sales of hydrocracking catalysts and custom catalysts.

Interest Expense, Net

Interest expense, net for the three months ended September 30, 2024 was $11.3 million, a decrease of $0.5 million, as compared to $11.8 million for the three months ended September 30, 2023. The decrease in interest expense, net was primarily due to the period over period decrease in the interest rate spread on the term loan during the three months ended September 30, 2024, as compared to the three months ended September 30, 2023.

Other Expense, Net

Other expense, net for the three months ended September 30, 2024 was $0.6 million,an increase of $0.2 million, as compared to $0.4 million for the three months ended September 30, 2023. The increase in other expense, net primarily relates to lower other income of $0.4 million during the three months ended September 30, 2024, as compared to the three months ended September 30, 2023, partially offset by a decrease in foreign currency exchange of $0.2 million mainly related to the remeasurement effects of monetary assets and liabilities, denominated in foreign currency.

Provision for Income Taxes

The provision for income taxes for the three months ended September 30, 2024 was $4.5 million, compared to $7.9 million for the three months ended September 30, 2023. The effective income tax rate for the three months ended September 30, 2024 was 24.0%, compared to 32.3% for the three months ended September 30, 2023. The Company's quarter over quarter effective income tax rate has fluctuated primarily due to a reduced discrete tax impact relative to pre-tax book income. The discrete tax items relate to a stock compensation shortfall, tax expense associated with the recording of accrued penalties and interest on historical uncertain tax positions and a tax benefit related to state tax refunds associated with prior tax years recorded during the current quarter.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the three months ended September 30, 2024 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation and a discrete tax expense associated with the recording of accrued penalties and interest associated with historical uncertain tax positions.

During the fourth quarter of 2024, the Company expects to recognize $8,023 of previously net unrecognized tax benefits, excluding interest and penalties, primarily due to the expiration of statutes of limitations during October 2024.

Net Income

For the foregoing reasons, net income was $14.3 million for the three months ended September 30, 2024, compared to $16.6 million for the three months ended September 30, 2023.

Adjusted EBITDA

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

	Three months ended September 30,		Change	
	2024	**2023**	**$**	**%**
	(in millions, except percentages)			
Adjusted EBITDA:[1]				
Ecoservices	$ 55.1	$ 54.7	$ 0.4	0.7 %
Advanced Materials & Catalysts[2]	10.9	16.4	(5.5)	(33.5)%
Unallocated corporate expenses	(6.2)	(3.2)	(3.0)	(93.8)%
Total	$ 59.8	$ 67.9	$ (8.1)	(11.9)%

(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 for the Advanced Materials & Catalysts segment includes our 50% portion of the Adjusted EBITDA from the Zeolyst Joint Venture. The Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $3.3 million for the three months ended September 30, 2024, which includes $0.9 million of equity in net loss, excluding $0.6 million of amortization of investment in affiliate step-up plus $3.6 million of joint venture depreciation, amortization and interest.

The Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $9.6 million for the three months ended September 30, 2023, which includes $4.7 million of equity in net income, excluding $1.6 million of amortization of investment in affiliate step-up plus $3.3 million of joint venture depreciation, amortization and interest.

Ecoservices: Adjusted EBITDA for the three months ended September 30, 2024 was $55.1 million, an increase of $0.4 million, or 0.7%, compared to $54.7 million for the three months ended September 30, 2023. The increase in Adjusted EBITDA was a result of favorable contractual pricing for regeneration services and higher sales volume of virgin sulfuric acid, partially offset by higher manufacturing costs associated with inflation, increased planned maintenance costs and costs associated with the manufacturing plant reliability improvement program.

Advanced Materials & Catalysts: Adjusted EBITDA for the three months ended September 30, 2024 was $10.9 million, a decrease of $5.5 million, or 33.5%, compared to $16.4 million for the three months ended September 30, 2023. The decrease in Adjusted EBITDA was primarily a result of lower sales volume within the Zeolyst Joint Venture associated with catalysts used in the production of sustainable fuels and emission control applications, partially offset by higher sales of hydrocracking catalysts and custom catalysts. In Advanced Silicas, favorable mix and increased sales of advanced silicas used for the production of polyethylene helped drive higher Adjusted EBITDA.

A reconciliation of net income to Adjusted EBITDA is as follows:

	Three months ended September 30, 2024	Three months ended September 30, 2023
	(in millions)	
Reconciliation of net income to Adjusted EBITDA		
Net income	$ 14.3	$ 16.6
Provision for income taxes	4.5	7.9
Interest expense, net	11.3	11.8
Depreciation and amortization	23.2	21.3
EBITDA	53.3	57.6
Joint venture depreciation, amortization and interest[(a)]	3.6	3.3
Amortization of investment in affiliate step-up[(b)]	0.6	1.6
Net loss on asset disposals[(c)]	0.2	1.0
Foreign currency exchange loss[(d)]	—	0.8
LIFO benefit[(e)]	(0.6)	—
Transaction and other related costs[(f)]	—	0.2
Equity-based compensation	3.0	3.5
Restructuring, integration and business optimization expenses[(g)]	0.5	0.3
Other[(h)]	(0.8)	(0.4)
Adjusted EBITDA	$ 59.8	$ 67.9

(a) We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Advanced Materials & Catalysts 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 intangible assets, including customer relationships and technical know-how.

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

(d) Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income related to the remeasurement effects of monetary assets and liabilities, including non-permanent intercompany debt, denominated in foreign currency.

(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, effectively reflecting the results as if these inventories were valued using the FIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.

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

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

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

Adjusted Net Income

Summarized Adjusted Net Income information is shown below in the following table:

	Three months ended September 30,					
	2024			2023		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Reconciliation of net income to Adjusted Net Income[(1)(2)]						
Net income	$ 18.8	$ 4.5	$ 14.3	$ 24.5	$ 7.9	$ 16.6
Amortization of investment in affiliate step-up[(b)]	0.6	0.1	0.5	1.6	0.5	1.1
Net loss on asset disposals[(c)]	0.2	0.1	0.1	1.0	0.3	0.7
Foreign currency exchange loss[(d)]	—	—	—	0.8	0.2	0.6
LIFO benefit[(e)]	(0.6)	(0.2)	(0.4)	—	—	—
Transaction and other related costs[(f)]	—	—	—	0.2	0.1	0.1
Equity-based compensation	3.0	0.7	2.3	3.5	0.3	3.2
Restructuring, integration and business optimization expenses[(g)]	0.5	0.1	0.4	0.3	0.1	0.2
Other[(h)]	(0.8)	(0.1)	(0.7)	(0.4)	(0.1)	(0.3)
Adjusted Net Income	$ 21.7	$ 5.2	$ 16.5	$ 31.5	$ 9.3	$ 22.2

(1) We define Adjusted Net Income as net income 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.

The adjustments to net income 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 September 30, 2024 and September 30, 2023, except for equity-based compensation. The tax effect on equity-based compensation is derived by removing the tax effect of any equity-based compensation expense disallowed as a result of its inclusion within IRC Sec. 162(m) and adding the tax effect of equity-based stock compensation shortfall recorded as a discrete item.

Results of Operations

Nine Months Ended September 30, 2024 Compared to the Nine Months Ended September 30, 2023

Highlights

The following is a summary of our financial performance for the nine months ended September 30, 2024 compared to the nine months ended September 30, 2023.

Sales

- Sales increased $4.2 million to $522.5 million. The increase in sales was primarily dueto higher sales volume of regeneration services and virgin sulfuric acid, partially offset by lower average selling price as a result of the pass-through of lower costs in Ecoservices and lower sales volume of advanced silicas.

Gross Profit

- Gross profit decreased $3.0 million to $147.6 million. The decrease in gross profit was primarily due to lower average selling price and unfavorable manufacturing costs, partially offset by higher sales volume and favorable variable costs.

Operating Income

- Operating income decreased by $0.5 million to $73.4 million. The decrease in operating income was due to a decrease in gross profit and higher selling, general and administrative expenses, partially offset by lower other operating expense, net.

Equity in Net Income of Affiliated Companies

- Equity in net income of affiliated companies for the nine months ended September 30, 2024 was $2.5 million, compared to $16.3 million for the nine months ended September 30, 2023. The decrease of $13.8 million was due to lower earnings from the Zeolyst Joint Venture during the nine months ended September 30, 2024, driven by lower sales volume.

The following is our unaudited condensed consolidated statements of income and a summary of financial results for the nine months ended September 30, 2024 and 2023:

	Nine months ended September 30,		Change	
	2024	2023	$	%
	(in millions, except percentages)			
Sales	$ 522.5	$ 518.3	$ 4.2	0.8 %
Cost of goods sold	374.9	367.7	7.2	2.0 %
Gross profit	147.6	150.6	(3.0)	(2.0)%
Gross profit margin	*28.2 %*	*29.1 %*		
Selling, general and administrative expenses	64.3	59.5	4.8	8.1 %
Other operating expense, net	9.9	17.2	(7.3)	(42.4)%
Operating income	73.4	73.9	(0.5)	(0.7)%
Operating income margin	*14.0 %*	*14.3 %*		
Equity in net (income) from affiliated companies	(2.5)	(16.3)	13.8	(84.7)%
Interest expense, net	37.6	30.8	6.8	22.1 %
Debt extinguishment costs	4.6	—	4.6	NM
Other expense, net	1.1	0.6	0.5	83.3 %
Income before income taxes	32.6	58.8	(26.2)	(44.6)%
Provision for income taxes	8.8	17.6	(8.8)	(50.0)%
Effective tax rate	*26.9 %*	*29.9 %*		
Net income	$ 23.8	$ 41.2	$ (17.4)	(42.2)%

Sales

	Nine months ended September 30,		Change	
	2024	2023	$	%
	(in millions, except percentages)			
Sales:				
Ecoservices	$ 449.4	$ 443.4	$ 6.0	1.4 %
Advanced Materials & Catalysts	73.1	74.9	(1.8)	(2.4)%
Total sales	$ 522.5	$ 518.3	$ 4.2	0.8 %

Ecoservices: Sales in Ecoservices for the nine months ended September 30, 2024 were $449.4 million, an increase of $6.0 million, or 1.4%, compared to sales of $443.4 million for the nine months ended September 30, 2023. The change in sales reflects higher sales volume of $36.4 million, offset by lower average selling prices of $30.4 million, inclusive of the negative impact associated with the pass-through of lower sulfur costs of approximately $7 million.

Sales volume was higher primarily due to increased virgin sulfuric acid and regeneration services sales for the nine months ended September 30, 2024 as compared to the nine months ended September 30, 2023, which had the adverse impact of Winter Storm Elliott and extended maintenance turnaround activity at our facilities in 2023, as well as strong demand for regeneration services in the gulf coast in 2024. Average selling prices were lower primarily due to the pass-through of lower costs, including sulfur, natural gas, freight and other variable costs.

Advanced Materials & Catalysts: Sales in Advanced Materials & Catalysts for the nine months ended September 30, 2024 were $73.1 million, a decrease of $1.8 million, or 2.4%, compared to sales of $74.9 million for the nine months ended September 30, 2023. The decrease in sales was primarily due to lower sales volume of advanced silicas used for the production of polyethylene compared to the nine months ended September 30, 2023.

Gross Profit

Gross profit for the nine months ended September 30, 2024 was $147.6 million, a decrease of $3.0 million, or 2.0%, compared to $150.6 million for the nine months ended September 30, 2023. The decrease in gross profit was primarily driven by lower average selling prices of $23.0 million, exclusive of the approximately $7 million of pass-through of sulfur costs and unfavorable manufacturing costs, partially offset by favorable variable costs and higher sales volume of $14.3 million.

Average selling prices were lower primarily due to the pass-through of lower costs, including sulfur, natural gas, electricity and other variable costs. The higher manufacturing costs were primarily driven by planned maintenance turnaround costs, general inflation and costs associated with the manufacturing plant reliability improvement program in Ecoservices. The increase in sales volume was primarily related to higher demand for both regeneration services and virgin sulfuric acid.

Selling, General and Administrative Expenses

Selling, general and administrative expenses for the nine months ended September 30, 2024 were $64.3 million, an increase of $4.8 million, as compared to $59.5 million for the nine months ended September 30, 2023. The increase in selling, general and administrative expenses was mainly due to an increase in other compensation-related expenses of $9.7 million, partially offset by a decrease in stock compensation of $2.1 million, professional fees of $0.5 million and other expenses of $2.0 million.

Other Operating Expense, Net

Other operating expense, net for the nine months ended September 30, 2024 was $9.9 million, a decrease of $7.3 million, compared to $17.2 million for the nine months ended September 30, 2023. The decrease in other operating expense, net was mainly driven by a decrease of $2.6 million in transaction costs, a decrease of $1.7 million in restructuring, integration and business optimization costs and a decrease in net losses on asset disposals of $2.5 million.

Equity in Net Income of Affiliated Companies

Equity in net income of affiliated companies for the nine months ended September 30, 2024 was $2.5 million, compared to $16.3 million for the nine months ended September 30, 2023. The decrease in earnings from the Zeolyst Joint Venture was driven by lower sales of catalysts used in the production of sustainable fuels and emission control applications, partially offset by higher hydrocracking catalyst sales during the nine months ended September 30, 2024 compared to the prior year.

Interest Expense, Net

Interest expense, net for the nine months ended September 30, 2024 was $37.6 million, an increase of $6.8 million, as compared to $30.8 million for the nine months ended September 30, 2023. The increase in interest expense, net was primarily due to the year over year increase in variable rates, which was partially offset by lower outstanding debt during the nine months ended September 30, 2024, as compared to the nine months ended September 30, 2023 and the benefits associated with our interest rate caps.

Debt Extinguishment Costs

Debt extinguishment costs for the nine months ended September 30, 2024 were $4.6 million. On June 12, 2024, we amended our existing senior secured term loan facility to reduce the applicable interest rates and extend the maturity of the facility to June 2031. The Company evaluated the terms of the amendment in accordance with *ASC 470-50 Debt - Modification and Extinguishment* and determined that the amendment was primarily a modification of debt. As a result, we recorded $4.5 million of third-party financing fees as debt extinguishment costs in the condensed consolidated income statement during the nine months ended September 30, 2024. In addition, previously unamortized deferred financing costs and original issue discount of $0.1 million associated with the existing senior secured term loan facility were written off as debt extinguishment costs for the nine months ended September 30, 2024.

Other Expense, Net

Other expense, net for the nine months ended September 30, 2024 was $1.1 million, an increase of $0.5 million, as compared to $0.6 million for the nine months ended September 30, 2023. The increase in other expense, net primarily consisted of an increase in foreign currency exchange of $0.6 million mainly related to the remeasurement effects of monetary assets and liabilities, denominated in foreign currency.

Provision for Income Taxes

The provision for income taxes for the nine months ended September 30, 2024 was $8.8 million, compared to $17.6 million for the nine months ended September 30, 2023. The effective income tax rate for the nine months ended September 30, 2024 was 26.9%, compared to 29.9% for the nine months ended September 30, 2023. The Company's effective income tax rate for the nine months ended September 30, 2024 was different from the effective tax rate for the nine months ended September 30, 2023 primarily due to a reduced discrete tax impact relative to pre-tax book income. The discrete tax items relate to a stock compensation shortfall recognized discretely in the respective quarters, tax expense associated with the recording of accrued penalties and interest on historical uncertain tax positions and a tax benefit related to state tax refunds associated with prior tax years recorded during the current quarter.

The difference between the U.S. federal statutory income tax rate and the Company's effective income tax rate for the nine months ended September 30, 2024 was mainly due to state and local taxes, a discrete shortfall tax expense related to stock compensation, a discrete tax expense associated with the recording of accrued penalties and interest on historical uncertain tax positions and recording a tax benefit related to tax refunds associated with prior years.

During the fourth quarter of 2024, the Company expects to recognize $8,023 of previously net unrecognized tax benefits, excluding interest and penalties, primarily due to the expiration of statutes of limitations during October 2024.

Net Income

For the foregoing reasons, net income was $23.8 million for the nine months ended September 30, 2024, compared to $41.2 million for the nine months ended September 30, 2023.

Adjusted EBITDA

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

	Nine months ended September 30,		Change	
	2024	2023	$	%
	(in millions, except percentages)			
Adjusted EBITDA[(1)]				
Ecoservices	$ 146.3	$ 151.6	$ (5.3)	(3.5)%
Advanced Materials & Catalysts[(2)]	36.8	54.7	(17.9)	(32.7)%
Unallocated corporate expenses	(20.8)	(16.2)	(4.6)	(28.4)%
Total	$ 162.3	$ 190.1	$ (27.8)	(14.6)%

(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 for the Advanced Materials & Catalysts segment includes our 50% portion of the Adjusted EBITDA from the Zeolyst Joint Venture. The Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $15.8 million for the nine months ended September 30, 2024, which includes $2.5 million of equity in net income, excluding $3.2 million of amortization of investment in affiliate step-up plus $10.1 million of joint venture depreciation, amortization and interest.

The Adjusted EBITDA from the Zeolyst Joint Venture included in the Advanced Materials & Catalysts segment was $31.3 million for the nine months ended September 30, 2023, which includes $16.4 million of equity in net income, excluding $4.8 million of amortization of investment in affiliate step-up plus $10.1 million of joint venture depreciation, amortization and interest.

Ecoservices: Adjusted EBITDA for the nine months ended September 30, 2024 was $146.3 million, a decrease of $5.3 million, or 3.5%, compared to $151.6 million for the nine months ended September 30, 2023. The decrease in Adjusted EBITDA was primarily a result of higher turnaround and planned maintenance costs and unfavorable net pricing, reflecting the timing and contractual pass-through of certain costs including energy and other indexed costs. This was partially offset by higher sales volume of both virgin sulfuric acid and regeneration services.

Advanced Materials & Catalysts: Adjusted EBITDA for the nine months ended September 30, 2024 was $36.8 million, a decrease of $17.9 million or 32.7%, compared to $54.7 million for the nine months ended September 30, 2023. The decrease in Adjusted EBITDA was primarily a result of lower sales volume within the Zeolyst Joint Venture associated with catalysts used in the production of sustainable fuels and emission control applications, partially offset by higher hydrocracking catalyst sales through the nine months ended September 30, 2024 compared to prior year.

A reconciliation of net income to Adjusted EBITDA is as follows:

	Nine months ended September 30, 2024	Nine months ended September 30, 2023
	(in millions)	
Reconciliation of net income to Adjusted EBITDA		
Net income	$ 23.8	$ 41.2
Provision for income taxes	8.8	17.6
Interest expense, net	37.6	30.8
Depreciation and amortization	66.8	62.5
EBITDA	137.0	152.1
Joint venture depreciation, amortization and interest[(a)]	10.1	10.1
Amortization of investment in affiliate step-up[(b)]	3.2	4.8
Debt extinguishment costs	4.6	—
Net loss on asset disposals[(c)]	0.8	3.3
Foreign currency exchange loss (gain)[(d)]	0.1	(0.4)
LIFO (benefit) expense[(e)]	(3.2)	2.5
Transaction and other related costs[(f)]	0.2	2.8
Equity-based compensation	10.5	12.6
Restructuring, integration and business optimization expenses[(g)]	0.9	2.4
Other[(h)]	(1.9)	(0.1)
Adjusted EBITDA	$ 162.3	$ 190.1

(a) We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Advanced Materials & Catalysts 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 intangible assets, including customer relationships and technical know-how.

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

(d) Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income related to the remeasurement effects of monetary assets and liabilities, including non-permanent intercompany debt, denominated in foreign currency.

(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, effectively reflecting the results as if these inventories were valued using the FIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.

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

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

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

Adjusted Net Income

Summarized Adjusted Net Income information is shown below in the following table:

	Nine months ended September 30,					
	2024			2023		
	Pre-tax amount	Tax expense (benefit)	After-tax amount	Pre-tax amount	Tax expense (benefit)	After-tax amount
	(in millions)					
Reconciliation of net income to Adjusted Net Income[(1)(2)]						
Net income	$ 32.6	$ 8.8	$ 23.8	$ 58.8	$ 17.6	$ 41.2
Amortization of investment in affiliate step-up[(b)]	3.2	0.8	2.4	4.8	1.3	3.5
Debt extinguishment costs	4.6	1.2	3.4	—	—	—
Net loss on asset disposals[(c)]	0.8	0.2	0.6	3.3	0.9	2.4
Foreign currency exchange loss (gain)[(d)]	0.1	—	0.1	(0.4)	(0.1)	(0.3)
LIFO (benefit) expense[(e)]	(3.2)	(0.8)	(2.4)	2.5	0.7	1.8
Transaction and other related costs[(f)]	0.2	0.1	0.1	2.8	0.8	2.0
Equity-based compensation	10.5	2.1	8.4	12.6	1.1	11.5
Restructuring, integration and business optimization expenses[(g)]	0.9	0.2	0.7	2.4	0.7	1.7
Other[(h)]	(1.9)	(0.6)	(1.3)	(0.1)	—	(0.1)
Adjusted Net Income	$ 47.8	$ 12.0	$ 35.8	$ 86.7	$ 23.0	$ 63.7

(1) We define Adjusted Net Income as net income 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.

The adjustments to net income are shown net of applicable tax rates of 25.1% and 27.4% for the nine months ended September 30, 2024 and 2023, respectively, except for equity-based compensation. The tax effect on equity-based compensation is derived by removing the tax effect of any equity-based compensation expense disallowed as a result of its inclusion within IRC Sec. 162(m), and adding the tax effect of equity-based stock compensation shortfall recorded as a discrete item.

Financial Condition, Liquidity and Capital Resources

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

We believe that our existing cash and cash equivalents and cash flows from operations, combined with availability under our ABL 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 ABL Facility to meet our future cash needs. As of September 30, 2024, we had cash and cash equivalents of $123.5 million and availability of $64.5 million under our ABL Facility, after giving effect to $3.3 million of outstanding letters of credit, for a total available liquidity of $188.0 million. We did not have any revolving credit facility borrowings as of September 30, 2024. As of September 30, 2024, we were in compliance with all covenants under our debt agreements.

Our ABL Facility has one financial covenant with two ratios to maintain. The first ratio compares the total ABL availability against a threshold: the greater of 10% of the line cap (which is defined as the lesser of our revolving loan commitments and the value of our assets) or $20.0 million. The greater of this threshold cannot be greater than the total availability of the ABL Facility. The second ratio compares the ABL Facility availability of the U.S. revolving credit facility against a $15.0 million threshold. As of September 30, 2024, we were in compliance with the financial covenant under the ABL Facility.

The 2024 Term Loan Facility and the ABL Facility contain various restrictive covenants. Each limits the ability of the Company and its restricted subsidiaries to incur certain indebtedness or liens, merge, consolidate or liquidate, dispose of certain property, make investments or declare or pay dividends, make optional payments, modify certain debt instruments, enter into certain transactions with affiliates, enter into certain sales and leasebacks and certain other non-financial restrictive covenants. During such time, the Company is required to maintain a fixed-charge coverage ratio of at least 1.0 to 1.0. The Company was in compliance with all debt covenants under the 2024 Term Loan Facility and the ABL Facility as of September 30, 2024.

Included in our cash and cash equivalents balance as of September 30, 2024 was $18.2 million of cash and cash equivalents in foreign jurisdictions. Depending on foreign cash balances, we have certain flexibility to repatriate funds should the need arise. Should the need arise, we would repatriate the funds in the most tax efficient manner from those subsidiaries. Repatriation of foreign cash is generally not subject to U.S. federal income taxes at the time of cash distribution. However, foreign earnings may still be taxed for state income tax purposes, as well as subject to certain foreign withholding tax obligations, when cash amounts are distributed back to the U.S.

Our liquidity requirements include interest payments related to our debt structure. As reported, our cash interest paid for the nine months ended September 30, 2024 and 2023 was approximately $37.0 million and $28.5 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 $8.7 million on interest expense.

We hedge the interest rate fluctuations on debt obligations through interest rate cap agreements. For more information about our interest rate cap agreements, refer to Note 12 — Financial Instruments of our condensed consolidated financials statements included in Part 1, Item 1 — Financial Statements (Unaudited).

Off-Balance Sheet Arrangements

The Company's off-balance sheet arrangements include $3.3 million of outstanding letters of credit on our ABL Facility as of September 30, 2024.

Cash Flow

	Nine months ended September 30, 2024	2023
	(in millions)	
Net cash provided by (used in):		
Operating activities	$ 106.4	$ 73.4
Investing activities	(56.2)	(53.6)
Financing activities	(15.1)	(90.5)
Effect of exchange rate changes on cash and cash equivalents	—	(1.9)
Net change in cash and cash equivalents	35.1	(72.6)
Cash and cash equivalents at beginning of period	88.4	110.9
Cash and cash equivalents at end of period	$ 123.5	$ 38.3

Net cash provided by operating activities was $106.4 million for the nine months ended September 30, 2024, compared to $73.4 million for the nine months ended September 30, 2023. Cash generated by operating activities, other than changes in working capital, was higher by $13.5 million during the nine months ended September 30, 2024, as compared to the same period in the prior year primarily due to dividends received from the Zeolyst Joint Venture. The increase in cash from working capital during the nine months ended September 30, 2024 of $19.5 million was favorable compared to the nine months ended September 30, 2023 primarily due to favorable changes in receivables and accrued liabilities, partially offset by unfavorable changes in inventories, prepaids and other current assets and accounts payable.

The favorable change in receivables was driven by the timing of collection of sales. The favorable change in accrued liabilities mainly relates to the timing of payments for variable employee compensation liabilities and non-trade payables from related parties. The unfavorable change in inventory was primarily due to the timing of sales orders and inventory build. The unfavorable change in accounts payable was due to the timing of vendor payments. The unfavorable change in prepaid and other current assets primarily relates to the timing of prepaid expenses and non-trade receivables from related parties.

Net cash used in investing activities was $56.2 million for the nine months ended September 30, 2024, compared to $53.6 million during the same period in 2023. Net cash used in investing activities consisted of $51.7 million and $53.6 million to fund capital expenditures during the nine months ended September 30, 2024 and 2023, respectively. The Company paid $4.5 million to complete a minority equity investment in Pajarito during the nine months ended September 30, 2024.

Net cash used in financing activities was $15.1 million for the nine months ended September 30, 2024, compared to $90.5 million during the same period in 2023. Net cash used in financing activities was primarily driven by the lower repurchases of the Company's common stock of $73.7 million during the nine months ended September 30, 2023.

Debt

	September 30, 2024	December 31, 2023
	(in millions)	
2024 Term Loan Facility	$ 873.0	$ 877.5
ABL Facility	—	—
Total debt	873.0	877.5
Original issue discount	(7.4)	(6.2)
Deferred financing costs	(2.9)	(3.4)
Total debt, net of original issue discount and deferred financing costs	862.7	867.9
Less: current portion	(8.7)	(9.0)
Total long-term debt, excluding current portion	$ 854.0	$ 858.9

As of September 30, 2024, our total debt was $873.0 million, excluding the original issue discount of $7.4 million and deferred financing costs of $2.9 million for our senior secured credit facilities. Our net debt as of September 30, 2024 was $749.5 million, including cash and cash equivalents of $123.5 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.

	Nine months ended September 30,	
	2024	**2023**
	(in millions)	
Maintenance capital expenditures	$ 40.4	$ 42.6
Growth capital expenditures	9.5	5.1
Total capital expenditures	$ 49.9	$ 47.7

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 nine months ended September 30, 2024, compared to the nine months ended September 30, 2023 due to extended turnaround activities and additional expenditures incurred related to Winter Storm Elliott impacting our manufacturing facilities in 2023. Growth capital expenditures were higher in the nine months ended September 30, 2024, compared to the nine months ended September 30, 2023 primarily due to the planned expansion of the Kansas City, Kansas silica catalyst production facility.

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.

While 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, we continually evaluate our critical accounting estimates, assumptions and judgments on an ongoing basis. The Company completes its annual goodwill and indefinite-lived intangible assets impairment test during the fourth quarter of each year, or more frequently if triggering events indicate a possible impairment. The Company determines the fair value of its reporting units using both a market approach and an income, or discounted cash flow, approach. As of October 1, 2023, the date of the Company's most recent quantitative assessments, the fair values of each of the Company's reporting units and the fair values of the Company's indefinite-lived trade names and trademarks exceeded their respective carrying values.

During the nine months ended September 30, 2024, the Company did not identify any events or circumstances that would more likely than not reduce the fair value of the Company's reporting units or intangible assets below their respective carrying values.

Although the estimated fair value of the Advanced Materials & Catalysts reporting unit exceeded its carrying value on October 1, 2023 by over 30%, the Company has experienced unfavorable effects on current operations resulting from certain macroeconomic and industry factors in specific end uses during the nine months ended September 30, 2024. Prolonged unfavorable effects could adversely impact the estimated fair value of the Advanced Materials & Catalysts reporting unit in future periods and may result in impairment charges.

Accounting Standards Not Yet Adopted

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

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

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

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

ITEM 4. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures as of September 30, 2024, 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 September 30, 2024 that materially affected, or which are reasonably likely to materially affect, our internal control over financial reporting.

PART II—OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS.

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

ITEM 1A. RISK FACTORS.

“Item 1A, Risk Factors” in our Annual Report on Form 10-K includes a discussion of our risk factors. There have been no material changes from the risk factors described in our Annual Report on Form 10-K.

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

During the three months ended September 30, 2024, the Company did not repurchase any of its common stock pursuant to the stock repurchase program. As of September 30, 2024, $229.6 million was available for share repurchases under the program.

ITEM 5. OTHER INFORMATION.

Trading Arrangements

During the three months ended September 30, 2024, none of the Company’s directors or executive officersadopted, modified or terminated a “Rule 10b5-1 trading arrangement” or “non-Rule 10b5-1 trading arrangement,” each as defined in Item 408(a) of Regulation S-K.

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 September 30, 2024, 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 September 30, 2024, 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:	November 1, 2024	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: November 1, 2024

/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: November 1, 2024	/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 September 30, 2024 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: November 1, 2024	/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 September 30, 2024 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: November 1, 2024	/s/ MICHAEL FEEHAN
	Michael Feehan
	Vice President and Chief Financial Officer
	(Principal Financial Officer)