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 29, 2023

OR

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

For the transition period from to

Commission file number 001-15885

MATERION CORPORATION

(Exact name of Registrant as specified in charter)

Ohio	**34-1919973**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

6070 Parkland Blvd., Mayfield Heights, Ohio 44124
(Address of principal executive offices) (Zip Code)

Registrant's telephone number, including area code:
(216)-486-4200

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, no par value	MTRN	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 ☑
Number of Shares of Common Stock, without par value, outstanding at September 29, 2023: 20,642,396.

PART 1 - FINANCIAL INFORMATION

Item 1. Financial Statements

Materion Corporation and Subsidiaries
Consolidated Statements of Income
(Unaudited)

(Thousands, except per share amounts)	Third Quarter Ended September 29, 2023	Third Quarter Ended September 30, 2022	Nine Months Ended September 29, 2023	Nine Months Ended September 30, 2022
Net sales	**$ 403,067**	$ 428,191	**$ 1,244,144**	$ 1,322,531
Cost of sales	**314,131**	345,448	**974,817**	1,077,070
Gross margin	**88,936**	82,743	**269,327**	245,461
Selling, general, and administrative expense	**38,806**	38,958	**118,053**	122,666
Research and development expense	**6,322**	7,430	**21,098**	22,096
Restructuring expense (income)	**1,077**	484	**3,194**	1,560
Other—net	**6,211**	6,774	**18,178**	18,575
Operating profit	**36,520**	29,097	**108,804**	80,564
Other non-operating (income)—net	**(685)**	(1,175)	**(2,141)**	(3,512)
Interest expense—net	**7,678**	5,888	**22,820**	14,325
Income before income taxes	**29,527**	24,384	**88,125**	69,751
Income tax expense	**2,963**	4,432	**11,891**	12,525
Net income	**$ 26,564**	$ 19,952	**$ 76,234**	$ 57,226
Basic earnings per share:				
Net income per share of common stock	**$ 1.29**	$ 0.97	**$ 3.70**	$ 2.79
Diluted earnings per share:				
Net income per share of common stock	**$ 1.27**	$ 0.96	**$ 3.65**	$ 2.76
Weighted-average number of shares of common stock outstanding:				
Basic	**20,640**	20,526	**20,611**	20,502
Diluted	**20,905**	20,780	**20,891**	20,756

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Statements of Comprehensive Income
(Unaudited)

	Third Quarter Ended		Nine Months Ended	
(Thousands)	**September 29, 2023**	September 30, 2022	**September 29, 2023**	September 30, 2022
Net income	**$ 26,564**	$ 19,952	**$ 76,234**	$ 57,226
Other comprehensive income (loss):				
Foreign currency translation adjustment	**(3,259)**	(6,094)	**(1,313)**	(14,484)
Derivative and hedging activity, net of tax	**2,019**	4,125	**2,860**	8,289
Pension and post-employment benefit adjustment, net of tax	**(145)**	8	**(466)**	(216)
Other comprehensive loss	**(1,385)**	(1,961)	**1,081**	(6,411)
Comprehensive income	**$ 25,179**	$ 17,991	**$ 77,315**	$ 50,815

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Balance Sheets
(Unaudited)

(Thousands)	September 29, 2023	December 31, 2022
Assets		
Current assets		
Cash and cash equivalents	**$ 16,401**	$ 13,101
Accounts receivable, net	**186,177**	215,211
Inventories, net	**452,042**	423,080
Prepaid and other current assets	**54,972**	39,056
Total current assets	**709,592**	690,448
Deferred income taxes	**3,214**	3,265
Property, plant, and equipment	**1,252,455**	1,209,205
Less allowances for depreciation, depletion, and amortization	**(755,626)**	(760,440)
Property, plant, and equipment, net	**496,829**	448,765
Operating lease, right-of-use assets	**57,747**	64,249
Intangible assets, net	**134,594**	143,219
Other assets	**27,186**	22,535
Goodwill	**319,435**	319,498
Total Assets	**$ 1,748,597**	$ 1,691,979
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	**$ 38,634**	$ 21,105
Accounts payable	**93,096**	107,899
Salaries and wages	**27,971**	35,543
Other liabilities and accrued items	**40,425**	54,993
Income taxes	**2,001**	3,928
Unearned revenue	**15,078**	15,496
Total current liabilities	**217,205**	238,964
Other long-term liabilities	**11,558**	12,181
Operating lease liabilities	**54,111**	59,055
Finance lease liabilities	**13,279**	13,876
Retirement and post-employment benefits	**20,089**	20,422
Unearned income	**109,076**	107,736
Long-term income taxes	**1,155**	665
Deferred income taxes	**27,795**	28,214
Long-term debt	**422,361**	410,876
Shareholders' equity		
Serial preferred stock (no par value; 5,000 authorized shares, none issued)	**—**	—
Common stock (no par value; 60,000 authorized shares, issued shares of 27,148 at both September 29th and December 31st)	**306,593**	288,100
Retained earnings	**837,598**	769,418
Common stock in treasury	**(237,259)**	(220,864)
Accumulated other comprehensive loss	**(40,828)**	(41,909)
Other equity	**5,864**	5,245
Total shareholders' equity	**871,968**	799,990
Total Liabilities and Shareholders' Equity	**$ 1,748,597**	$ 1,691,979

See the notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Statements of Cash Flows
(Unaudited)

(Thousands)	**Nine Months Ended September 29, 2023**	Nine Months Ended September 30, 2022
Cash flows from operating activities:		
Net income	**$ 76,234**	$ 57,226
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion, and amortization	**46,524**	39,223
Amortization of deferred financing costs in interest expense	**1,284**	1,310
Stock-based compensation expense (non-cash)	**7,578**	5,997
Deferred income tax expense (benefit)	**(149)**	1,825
Changes in assets and liabilities:		
Accounts receivable	**27,832**	(20,964)
Inventory	**(30,868)**	(64,832)
Prepaid and other current assets	**(16,175)**	(3,019)
Accounts payable and accrued expenses	**(25,533)**	(1,785)
Unearned revenue	**(12,398)**	(2,191)
Interest and taxes payable	**(1,730)**	(1,741)
Unearned income due to customer prepayments	**16,676**	17,501
Other-net	**(4,770)**	5,654
Net cash provided by operating activities	**84,505**	34,204
Cash flows from investing activities:		
Payments for purchase of property, plant, and equipment	**(85,251)**	(54,236)
Payments for mine development	**(9,326)**	—
Proceeds from sale of property, plant, and equipment	**417**	827
Payments for acquisition, net of cash acquired	**—**	(2,971)
Net cash used in investing activities	**(94,160)**	(56,380)
Cash flows from financing activities:		
Proceeds from borrowings under credit facilities, net	**39,649**	55,735
Repayment of long-term debt	**(11,579)**	(11,761)
Principal payments under finance lease obligations	**(1,297)**	(1,985)
Cash dividends paid	**(7,937)**	(7,584)
Payments of withholding taxes for stock-based compensation awards	**(5,101)**	(3,056)
Net cash provided by financing activities	**13,735**	31,349
Effects of exchange rate changes	**(780)**	(2,953)
Net change in cash and cash equivalents	**3,300**	6,220
Cash and cash equivalents at beginning of period	**13,101**	14,462
Cash and cash equivalents at end of period	**$ 16,401**	$ 20,682

See notes to these consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Statements of Shareholders' Equity
(Unaudited)

(Thousands, except per share amounts)	Common Shares: Common Shares	Common Shares: Common Shares Held in Treasury	Shareholders' Equity: Common Stock	Shareholders' Equity: Retained Earnings	Shareholders' Equity: Common Stock in Treasury	Shareholders' Equity: Accumulated Other Comprehensive Loss	Shareholders' Equity: Other Equity	Shareholders' Equity: Total
Balance at June 30, 2023	20,637	(6,511)	$ 303,390	$ 813,793	$ (236,423)	$ (39,443)	$ 5,806	$ 847,123
Net income	—	—	—	$ 26,564	—	—	—	26,564
Other comprehensive income	—	—	—	—	—	(1,385)	—	(1,385)
Cash dividends declared ($0.130 per share)	—	—	—	(2,683)	—	—	—	(2,683)
Stock-based compensation activity	8	8	3,174	(76)	(562)	—	—	2,536
Payments of withholding taxes for stock-based compensation awards	(3)	(3)	—	—	(229)	—	—	(229)
Directors’ deferred compensation	—	—	29	—	(45)	—	58	42
Balance at September 29, 2023	20,642	(6,506)	$ 306,593	$ 837,598	$ (237,259)	$ (40,828)	$ 5,864	$ 871,968
Balance at July 1, 2022	20,523	(6,625)	$ 281,296	$ 725,918	$ (218,356)	$ (44,619)	$ 4,915	$ 749,154
Net income	—	—	—	19,952	—	—	—	19,952
Other comprehensive income	—	—	—	—	—	(1,961)	—	(1,961)
Cash dividends declared ($0.125 per share)	—	—	—	(2,557)	—	—	—	(2,557)
Stock-based compensation activity	6	6	2,695	(30)	(392)	—	—	2,273
Payments of withholding taxes for stock-based compensation awards	(2)	(2)	—	—	(244)	—	—	(244)
Directors’ deferred compensation	1	1	33	—	(227)	—	254	60
Balance at September 30, 2022	20,528	(6,620)	$ 284,024	$ 743,283	$ (219,219)	$ (46,580)	$ 5,169	$ 766,677

(Thousands, except per share amounts)	Common Shares: Common Shares	Common Shares: Common Shares Held in Treasury	Shareholders' Equity: Common Stock	Shareholders' Equity: Retained Earnings	Shareholders' Equity: Common Stock in Treasury	Shareholders' Equity: Accumulated Other Comprehensive Loss	Shareholders' Equity: Other Equity	Shareholders' Equity: Total
Balance at December 31, 2022	20,543	(6,605)	$ 288,100	$ 769,418	$ (220,864)	$ (41,909)	$ 5,245	$ 799,990
Net income	—	—	—	76,234	—	—	—	76,234
Other comprehensive loss	—	—	—	—	—	1,081	—	1,081
Cash dividends declared ($0.385 per share)	—	—	—	(7,937)	—	—	—	(7,937)
Stock-based compensation activity	146	146	18,416	(117)	(10,721)	—	—	7,578
Payments of withholding taxes for stock-based compensation awards	(48)	(48)	—	—	(5,101)	—	—	(5,101)
Directors' deferred compensation	1	1	77	—	(573)	—	619	123
Balance at September 29, 2023	20,642	(6,506)	$ 306,593	$ 837,598	$ (237,259)	$ (40,828)	$ 5,864	$ 871,968
Balance at December 31, 2021	20,448	(6,700)	$ 271,978	$ 693,756	$ (209,920)	$ (40,169)	$ 4,795	$ 720,440
Net income	—	—	—	57,226	—	—	—	57,226
Other comprehensive loss	—	—	—	—	—	(6,411)	—	(6,411)
Cash dividends declared ($0.370 per share)	—	—	—	(7,584)	—	—	—	(7,584)
Stock-based compensation activity	115	115	11,938	(115)	(5,941)	—	—	5,882
Payments of withholding taxes for stock-based compensation awards	(37)	(37)	—	—	(3,056)	—	—	(3,056)
Directors' deferred compensation	2	2	108	—	(302)	—	374	$ 180
Balance at September 30, 2022	20,528	(6,620)	$ 284,024	$ 743,283	$ (219,219)	$ (46,580)	$ 5,169	$ 766,677

See notes to these consolidated financial statements.

Note A — Accounting Policies

Basis of Presentation:

The accompanying consolidated financial statements of Materion Corporation and its subsidiaries (referred to herein as the Company, our, we, or us) contain all of the adjustments necessary to present fairly the financial position, results of operations, and cash flows for the interim periods reported. All adjustments were of a normal and recurring nature.

These consolidated financial statements should be read in conjunction with the consolidated financial statements and related notes included in the Company's 2022 Annual Report on Form 10-K. The interim period results are not necessarily indicative of the results to be expected for the full year.

New Pronouncements Adopted:

In March 2020, the FASB issued ASU 2020-04, *Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting*. This guidance is intended to provide temporary optional expedients and exceptions to the U.S. GAAP guidance on contract modifications and hedge accounting to ease the financial reporting burden related to the expected market transition from the London Interbank Offered Rate (LIBOR) and other interbank offered rates to alternative reference rates. This guidance is available immediately and may be implemented in any period prior to the guidance expiration on December 31, 2024. The Company has applied this guidance in accounting for the interest rate swaps discussed in Note N. Any additional reference rate reform impacts will be accounted for in accordance with ASU 2020-04 and ASU 2022-06.

No other recently issued or effective ASUs had, or are expected to have, a material effect on the Company's results of operations, financial condition, or liquidity.

Note B — Segment Reporting

The Company has the following reportable segments: Performance Materials, Electronic Materials, Precision Optics, and Other. The Company’s reportable segments represent components of the Company for which separate financial information is available that is utilized on a regular basis by the Chief Executive Officer, the Company's chief operating decision maker, in determining how to allocate the Company’s resources and evaluate performance.

Performance Materials provides advanced engineered solutions comprised of beryllium and non-beryllium containing alloy systems and custom engineered parts in strip, bulk, rod, plate, bar, tube, and other customized shapes.

Electronic Materials produces advanced chemicals, microelectric packaging, precious metal, non-precious metal, and specialty metal products, including vapor deposition targets, frame lid assemblies, clad and precious metal preforms, high temperature braze materials, and ultra-fine wire.

Precision Optics produces thin film coatings, optical filter materials, sputter-coated, and precision-converted thin film materials.

The Other reportable segment includes unallocated corporate costs and assets.

The primary measurement used by management to measure the financial performance of each segment is earnings before interest, taxes, depreciation and amortization (EBITDA).

The below table presents financial information for each segment and a reconciliation of EBITDA to Net Income (the most directly comparable GAAP financial measure) for the third quarter and first nine months of 2023 and 2022:

(Thousands)	Third Quarter 2023	Third Quarter 2022	First Nine Months 2023	First Nine Months 2022
Net sales:				
Performance Materials[1]	**$ 184,642**	$ 169,357	**$ 554,427**	$ 473,876
Electronic Materials[1]	**192,305**	230,841	**611,855**	762,649
Precision Optics	**26,120**	27,993	**77,862**	86,006
Other	**—**	—	**—**	—
Net sales	**403,067**	428,191	**1,244,144**	1,322,531
Segment EBITDA:				
Performance Materials	**$ 46,366**	$ 28,866	**$ 134,061**	$ 80,886
Electronic Materials	**10,155**	16,853	**37,504**	51,338
Precision Optics	**3,261**	3,546	**7,654**	9,281
Other	**(7,497)**	(5,839)	**(21,750)**	(18,206)
Total Segment EBITDA	**52,285**	43,426	**157,469**	123,299
Income tax expense	**2,963**	4,432	**11,891**	12,525
Interest expense - net	**7,678**	5,888	**22,820**	14,325
Depreciation, depletion and amortization	**15,080**	13,154	**46,524**	39,223
Net income	**$ 26,564**	$ 19,952	**$ 76,234**	$ 57,226

[1] Excludes inter-segment sales of $3.2 million for the third quarter of 2023 and $7.3 million for the first nine months of 2023 for Electronic Materials. There were no material inter-segment sales for Performance Materials in 2023. Excludes inter-segment sales of $0.2 million for the third quarter of 2022 and $0.6 million for the first nine months of 2022 for Performance Materials and $3.8 million for the third quarter of 2022 and $12.1 million for the first nine months of 2022 for Electronic Materials. Inter-segment sales are eliminated in consolidation.

The following table disaggregates revenue for each segment by end market for the third quarter and first nine months of 2023 and 2022:

(Thousands)	Performance Materials	Electronic Materials	Precision Optics	Other	Total
Third Quarter 2023					
End Market					
Semiconductor	**$ 2,712**	**$ 151,388**	**$ 624**	**$ —**	**$ 154,724**
Industrial	**32,046**	**7,958**	**6,954**	**—**	**46,958**
Aerospace and defense	**30,938**	**1,102**	**7,124**	**—**	**39,164**
Consumer electronics	**10,827**	**144**	**4,254**	**—**	**15,225**
Automotive	**19,447**	**1,747**	**2,606**	**—**	**23,800**
Energy	**13,013**	**25,179**	**—**	**—**	**38,192**
Telecom and data center	**15,685**	**10**	**—**	**—**	**15,695**
Other	**59,974**	**4,777**	**4,558**	**—**	**69,309**
Total	**$ 184,642**	**$ 192,305**	**$ 26,120**	**$ —**	**$ 403,067**
Third Quarter 2022					
End Market					
Semiconductor	$ 2,410	$ 185,223	$ 1,151	$ —	$ 188,784
Industrial	44,550	9,383	7,564	—	61,497
Aerospace and defense	28,262	1,243	3,532	—	33,037
Consumer electronics	9,607	364	6,799	—	16,770
Automotive	24,802	1,863	2,268	—	28,933
Energy	15,971	25,220	—	—	41,191
Telecom and data center	15,412	42	—	—	15,454
Other	28,343	7,503	6,679	—	42,525
Total	$ 169,357	$ 230,841	$ 27,993	$ —	$ 428,191

(Thousands)	Performance Materials	Electronic Materials	Precision Optics	Other	Total
First Nine Months 2023					
End Market					
Semiconductor	**$ 9,713**	**$ 487,361**	**$ 2,279**	**$ —**	**$ 499,353**
Industrial	**111,436**	**25,102**	**22,400**	**—**	**158,938**
Aerospace and defense	**92,734**	**4,670**	**17,771**	**—**	**115,175**
Consumer electronics	**30,473**	**526**	**11,075**	**—**	**42,074**
Automotive	**66,753**	**4,966**	**7,090**	**—**	**78,809**
Energy	**38,597**	**71,940**	**—**	**—**	**110,537**
Telecom and data center	**49,223**	**68**	**—**	**—**	**49,291**
Other	**155,498**	**17,222**	**17,247**	**—**	**189,967**
Total	**$ 554,427**	**$ 611,855**	**$ 77,862**	**$ —**	**$ 1,244,144**
First Nine Months 2022					
End Market					
Semiconductor	$ 6,657	$ 613,887	$ 4,007	$ —	$ 624,551
Industrial	125,588	37,206	23,605	—	186,399
Aerospace and defense	79,561	5,141	12,344	—	97,046
Consumer electronics	38,822	969	17,925	—	57,716
Automotive	71,893	4,985	7,294	—	84,172
Energy	38,231	79,701	—	—	117,932
Telecom and data center	47,716	107	—	—	47,823
Other	65,408	20,653	20,831	—	106,892
Total	$ 473,876	$ 762,649	$ 86,006	$ —	$ 1,322,531

Note C — Revenue Recognition

Net sales consist primarily of revenue from the sale of precious and non-precious specialty metals, beryllium and copper-based alloys, beryllium composites, and other products into numerous end markets. The Company requires an agreement with a customer that creates enforceable rights and performance obligations. The Company generally recognizes revenue in an amount that reflects the consideration to which it expects to be entitled upon satisfaction of a performance obligation by transferring control over a product to the customer. Control over a product is generally transferred to the customer when the Company has a present right to payment, the customer has legal title, the customer has physical possession, the customer has the significant risks and rewards of ownership, and/or the customer has accepted the product.

Transaction Price Allocated to Future Performance Obligations: Accounting Standards Codification 606, *Revenue from Contracts with Customers,* requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied at September 29, 2023. Remaining performance obligations include non-cancelable purchase orders and customer contracts. The guidance provides certain practical expedients that limit this requirement. As such, the Company does not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

After considering the practical expedient at September 29, 2023, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately $55.9 million.

Contract Balances: The timing of revenue recognition, billings, and cash collections resulted in the following contract assets and contract liabilities:

(Thousands)	**September 29, 2023**	December 31, 2022	$ change	% change
Accounts receivable, trade	**$ 186,937**	$ 215,726	$ (28,789)	(13)%
Unbilled receivables	**16,910**	10,765	6,145	57 %
Unearned revenue	**15,078**	15,496	(418)	(3)%

Accounts receivable, trade represents payments due from customers relating to the transfer of the Company's products and services. The Company believes that its receivables are collectible and appropriate allowances for doubtful accounts have been recorded. Impairment losses (bad debt) incurred related to our receivables were immaterial during the third quarter of 2023.

Unbilled receivables represent expenditures on contracts, plus applicable profit margin, not yet billed. Unbilled receivables are generally billed and collected within one year. Billings made on contracts are recorded as a reduction of unbilled receivables.

Unearned revenue is recorded for consideration received from customers in advance of satisfaction of the related performance obligations. The Company recognized approximately $11.6 million of the December 31, 2022 unearned amounts as revenue during the first nine months of 2023.

As a practical expedient, the Company does not adjust the promised amount of consideration for the effects of a significant financing component because the period between the transfer of a product or service to a customer and when the customer pays for that product or service will be one year or less. The Company does not include extended payment terms in its contracts with customers.

Note D — Restructuring

Over the first nine months of 2023, the Company implemented various restructuring initiatives across the Performance Materials, Electronic Materials and Precision Optics segments to improve operational efficiency. This resulted in severance and related costs of approximately $1.1 million and $3.2 million during the three months and nine months ended September 29, 2023, respectively. Approximately $1.9 million of those severance costs were paid as of September 29, 2023.

In the first nine months of 2022, the Company recorded a combined total of $1.6 million of restructuring charges in our Precision Optics, Electronic Materials and Other segments as a result of cost reduction actions taken in order to reduce our fixed cost structure.

Note E — Other-net

Other-net for the third quarter and first nine months of 2023 and 2022 is summarized as follows:

	Third Quarter Ended		**Nine Months Ended**	
(Thousands)	**September 29, 2023**	September 30, 2022	**September 29, 2023**	September 30, 2022
Amortization of intangible assets	**$ 3,153**	$ 3,088	**$ 9,403**	$ 9,318
Metal consignment fees	**2,580**	3,111	**8,307**	8,993
Foreign currency (gain) loss	**609**	235	**571**	(70)
Other items	**(131)**	340	**(103)**	334
Total	**$ 6,211**	$ 6,774	**$ 18,178**	$ 18,575

Note F — Income Taxes

The Company's effective tax rate for the third quarter of 2023 and 2022 was 10.0% and 18.2%, respectively, and 13.5% and 18.0% in the first nine months of 2023 and 2022, respectively. The effective tax rate for 2023 was lower than the statutory tax rate primarily due to the impact of the foreign derived intangible income deduction, percentage depletion, research and development and production credits. The effective tax rate for 2022 was lower than the statutory tax rate primarily due to the impact of percentage depletion, research and development credits and the foreign-derived intangible income deduction. The effective tax rate for the first nine months of 2023 included a net discrete income tax benefit of $3.4 million, primarily related to an optimization of our foreign-derived intangible income deduction benefit, excess tax benefits from stock-based compensation awards and return to provision adjustments . The effective tax rate for the first nine months of 2022 included a net discrete income tax benefit of $0.9 million, primarily related to excess tax benefits from stock-based compensation awards and return to provision adjustments.

Government Tax Credits

On August 16, 2022, President Biden signed the Inflation Reduction Act of 2022 (IRA) into law. The IRA, among other provisions, includes a new corporate alternative minimum tax on certain large corporations and new or enhanced federal energy and manufacturing tax credits effective for tax years beginning in 2023. The Company is not subject to the minimum tax as our average annual book profits over the prior three-year period were less than $1 billion. The IRA introduced a new advanced manufacturing production credit (production credit), which provides an annual cash benefit for a portion of production costs for the sale of certain minerals produced in the U.S. and sold by a taxpayer during the year.

The IRA affords the Company eligibility to a production credit beginning in 2023, for which the Company expects to recognize cash savings of approximately $10 million for the year ending December 31, 2023. The issuance of guidance and interpretation as to the eligibility for, calculation of, and methods for claiming the production credit remain pending. We will continue to monitor developments related to the production credit from the Internal Revenue Service and U.S. Treasury Department and evaluate the potential impact to the Company’s production credit. The Company will finalize the expected annual production credit impact as further guidance is issued.

The production credit is recorded as a reduction in cost of goods sold as the applicable items are produced and sold. U.S. GAAP does not address the accounting for government grants received by a business entity that are outside the scope of ASC 740; our accounting policy is to analogize to IAS 20, *Accounting for Government Grants and Disclosure of Government Assistance*, under IFRS Accounting Standards. We recognize the benefit of tax credits accounted for by applying IAS 20 in pretax income on a systematic basis in line with its recognition of the expenses that the grant is intended to compensate.

Note G — Earnings Per Share (EPS)

The following table sets forth the computation of basic and diluted EPS:

(Thousands, except per share amounts)	Third Quarter Ended September 29, 2023	Third Quarter Ended September 30, 2022	Nine Months Ended September 29, 2023	Nine Months Ended September 30, 2022
Numerator for basic and diluted EPS:				
Net income	**$ 26,564**	$ 19,952	**$ 76,234**	$ 57,226
Denominator:				
Denominator for basic EPS:				
Weighted-average shares outstanding	**20,640**	20,526	**20,611**	20,502
Effect of dilutive securities:				
Stock appreciation rights	**79**	85	**87**	85
Restricted stock units	**84**	98	**89**	113
Performance-based restricted stock units	**102**	71	**104**	55
Diluted potential common shares	**265**	254	**280**	254
Denominator for diluted EPS:				
Adjusted weighted-average shares outstanding	**20,905**	20,780	**20,891**	20,756
Basic EPS	**$ 1.29**	$ 0.97	**$ 3.70**	$ 2.79
Diluted EPS	**$ 1.27**	$ 0.96	**$ 3.65**	$ 2.76

Adjusted weighted-average shares outstanding - diluted exclude securities totaling 47,250 and 45,016 for the quarters ended September 29, 2023 and September 30, 2022, respectively, and 36,927 and 54,680 for the nine months ended September 29, 2023 and September 30, 2022, respectively. These securities are primarily related to restricted stock units and stock appreciation rights with fair market values and exercise prices greater than the average market price of the Company's common shares and were excluded from the dilution calculation as the effect would have been anti-dilutive.

Note H — Inventories

Inventories on the Consolidated Balance Sheets are summarized as follows:

(Thousands)	September 29, 2023	December 31, 2022
Raw materials and supplies	**$ 109,731**	$ 113,694
Work in process	**269,508**	249,105
Finished goods	**72,803**	60,281
Inventories, net	**$ 452,042**	$ 423,080

The Company maintains the majority of the precious metals and copper used in production on a consignment basis in order to reduce its exposure to metal market price movements and to reduce its working capital investment. The notional value of off-balance sheet precious metals and copper was $344.8 million and $373.1 million as of September 29, 2023 and December 31, 2022, respectively.

Note I — Customer Prepayments

In 2020, the Company entered into an investment agreement and a master supply agreement with a customer to procure equipment to manufacture product for the customer. The customer provided prepayments to the Company to fund the necessary infrastructure improvements and procure the equipment necessary to supply the customer with the desired product. The Company owns, operates and maintains the equipment that is being used to manufacture product for the customer.

Revenue will be recognized as the Company fulfills purchase orders and ships the commercial product to the customer, as product delivery is considered the satisfaction of the performance obligation.

Additionally, during the second quarter of 2022, the Company entered into an amendment to the investment agreement with the same customer to procure additional equipment to manufacture product for the customer. During 2023, the Company has received approximately $16.7 million in prepayments under the terms of this amended agreement.

As of September 29, 2023 and December 31, 2022, $90.0 million and $85.9 million, respectively, of prepayments are classified as Unearned income on the Consolidated Balance Sheets. The prepayments will remain in Unearned income until commercial purchase orders are received for product serviced out of the equipment, at which time a portion of the purchase order value related to prepayments will be reclassified to Unearned revenue. As of September 29, 2023 $5.8 million of the prepayments are classified as Unearned revenue.

Note J — Pensions and Other Post-employment Benefits

The following is a summary of the net periodic benefit cost for the third quarter and first nine months ended September 29, 2023 and September 30, 2022, respectively, for the pension plans as shown below. The Pension Benefits column aggregates defined benefit pension plans in the U.S., Germany, Liechtenstein, England, and the U.S. supplemental retirement plans. The Other Benefits column includes the domestic retiree medical and life insurance plan.

	Pension Benefits		Other Benefits	
	Third Quarter Ended		Third Quarter Ended	
(Thousands)	September 29, 2023	September 30, 2022	September 29, 2023	September 30, 2022
Components of net periodic benefit (credit) cost				
Service cost	**$ 209**	$ 281	**$ 13**	$ 21
Interest cost	**1,966**	1,203	**68**	39
Expected return on plan assets	**(2,421)**	(2,380)	**—**	—
Amortization of prior service (benefit) cost	**(21)**	(19)	**(139)**	(374)
Amortization of net loss (gain)	**(75)**	410	**(95)**	(68)
Net periodic benefit (credit) cost	**$ (342)**	$ (505)	**$ (153)**	$ (382)

	Pension Benefits		Other Benefits	
	Nine Months Ended		Nine Months Ended	
(Thousands)	September 29, 2023	September 30, 2022	September 29, 2023	September 30, 2022
Components of net periodic benefit (credit) cost				
Service cost	**$ 642**	$ 891	**$ 38**	$ 63
Interest cost	**5,909**	3,639	**205**	117
Expected return on plan assets	**(7,282)**	(7,158)	**—**	—
Amortization of prior service (benefit) cost	**(65)**	(57)	**(417)**	(1,122)
Amortization of net loss (gain)	**(231)**	1,260	**(285)**	(204)
Net periodic benefit (credit) cost	**$ (1,027)**	$ (1,425)	**$ (459)**	$ (1,146)

The Company did not make any contributions to its domestic defined benefit plan in the third quarter or first nine months of 2023 or 2022.

The Company reports the service cost component of net periodic benefit cost in the same line item as other compensation costs in operating expenses and the non-service cost components of net periodic benefit cost in Other non-operating (income) expense.

Note K — Accumulated Other Comprehensive Income (Loss)

Changes in the components of accumulated other comprehensive income, including the amounts reclassified, for the third quarter and first nine months of 2023 and 2022 are as follows:

	Gains and Losses on Cash Flow Hedges						
(Thousands)	**Foreign Currency**	**Interest Rate**	**Precious Metals**	**Total**	**Pension and Post-Employment Benefits**	**Foreign Currency Translation**	**Total**
Balance at June 30, 2023	$ 1,290	$ 7,069	$ (443)	$ 7,916	$ (40,549)	$ (6,810)	$ (39,443)
Other comprehensive income (loss) before reclassifications	766	2,398	515	3,679	—	(3,259)	420
Amounts reclassified from accumulated other comprehensive income (loss)	—	(1,140)	83	(1,057)	(299)	—	(1,356)
Net current period other comprehensive (loss) income before tax	766	1,258	598	2,622	(299)	(3,259)	(936)
Deferred taxes	176	289	138	603	(154)	—	449
Net current period other comprehensive (loss) income after tax	590	969	460	2,019	(145)	(3,259)	(1,385)
Balance at September 29, 2023	$ 1,880	$ 8,038	$ 17	$ 9,935	$ (40,694)	$ (10,069)	$ (40,828)
Balance at July 1, 2022	$ 3,226	$ 3,250	$ 108	$ 6,584	$ (39,926)	$ (11,277)	$ (44,619)
Other comprehensive (loss) income before reclassifications	837	4,360	441	$ 5,638	—	(6,094)	(456)
Amounts reclassified from accumulated other comprehensive income (loss)	(41)	(115)	(126)	$ (282)	(18)	—	(300)
Net current period other comprehensive (loss) income before tax	796	4,245	315	5,356	(18)	(6,094)	(756)
Deferred taxes	183	976	72	1,231	(26)	—	1,205
Net current period other comprehensive (loss) income after tax	613	3,269	243	4,125	8	(6,094)	(1,961)
Balance at September 30, 2022	$ 3,839	$ 6,519	$ 351	$ 10,709	$ (39,918)	$ (17,371)	$ (46,580)

	Gains and Losses on Cash Flow Hedges						
(Thousands)	Foreign Currency	Interest Rate	Precious Metals	Total	Pension and Post-Employment Benefits	Foreign Currency Translation	Total
Balance at December 31, 2022	$ 1,243	$ 6,055	$ (223)	$ 7,075	$ (40,228)	$ (8,756)	$ (41,909)
Other comprehensive income (loss) before reclassifications	862	5,525	119	6,506	—	(1,313)	5,193
Amounts reclassified from accumulated other comprehensive income (loss)	(35)	(2,950)	193	(2,792)	(844)	—	(3,636)
Net current period other comprehensive (loss) income before tax	827	2,575	312	3,714	(844)	(1,313)	1,557
Deferred taxes	190	592	72	854	(378)	—	476
Net current period other comprehensive (loss) income after tax	637	1,983	240	2,860	(466)	(1,313)	1,081
Balance at September 29, 2023	$ 1,880	$ 8,038	$ 17	$ 9,935	$ (40,694)	$ (10,069)	$ (40,828)
Balance at December 31, 2021	$ 2,348	$ —	$ 72	$ 2,420	$ (39,702)	$ (2,887)	$ (40,169)
Other comprehensive (loss) income before reclassifications	2,107	8,228	388	10,723	—	(14,484)	(3,761)
Amounts reclassified from accumulated other comprehensive income (loss)	(170)	238	(27)	41	(1,028)	—	(987)
Net current period other comprehensive (loss) income before tax	1,937	8,466	361	10,764	(1,028)	(14,484)	(4,748)
Deferred taxes	446	1,947	82	2,475	(812)	—	1,663
Net current period other comprehensive (loss) income after tax	1,491	6,519	279	8,289	(216)	(14,484)	(6,411)
Balance at September 30, 2022	$ 3,839	$ 6,519	$ 351	$ 10,709	$ (39,918)	$ (17,371)	$ (46,580)

Reclassifications from accumulated other comprehensive income (loss) of gains and losses on foreign currency cash flow hedges are recorded in Net sales in the Consolidated Statements of Income. Reclassifications from accumulated other comprehensive income (loss) of gains and losses on precious metal and copper cash flow hedges are recorded in Cost of sales in the Consolidated Statements of Income. Reclassifications from accumulated other comprehensive income (loss) of gains and losses on the interest rate cash flow hedge is recorded in Interest expense in the Consolidated Statements of Income. Refer to Note N for additional details on cash flow hedges.

Reclassifications from accumulated other comprehensive income (loss) for pension and post-employment benefits are included in the computation of the net periodic pension and post-employment benefit expense. Refer to Note J for additional details on pension and post-employment expenses.

Note L — Stock-based Compensation Expense

Stock-based compensation expense, which includes awards settled in shares and in cash, was $2.6 million and $7.8 million in the third quarter and first nine months of 2023, respectively, compared to $2.2 million and $6.0 million, respectively, in the same periods of 2022.

The Company granted 47,084 stock appreciation rights (SARs) to certain employees during the first nine months of 2023. The weighted-average exercise price per share and weighted-average fair value per share of the SARs granted during the nine months ended September 29, 2023 were $113.28 and $42.27, respectively. The Company estimated the fair value of the SARs using the following weighted-average assumptions in the Black-Scholes model:

Risk-free interest rate	4.27 %
Dividend yield	0.44 %
Volatility	39.0 %
Expected term (in years)	4.5

The Company granted 54,788 stock-settled restricted stock units (RSUs) to certain employees during the first nine months of 2023. The Company measures the fair value of stock-settled RSUs based on the closing market price of a share of Materion common stock on the date of the grant. The weighted-average fair value per share was $112.53 for stock-settled RSUs granted to employees during the nine months ended September 29, 2023. RSUs are generally expensed over the vesting period of three years for employees.

The Company granted stock-settled performance-based restricted stock units (PRSUs) to certain employees in the first nine months of 2023. The weighted-average fair value of the stock-settled PRSUs was $154.97 per share and will be expensed over the vesting period of three years. The final payout to the employees for all PRSUs will be based upon the Company's return on invested capital and its total return to shareholders over the vesting period relative to a peer group's performance over the same period.

At September 29, 2023, unrecognized compensation cost related to the unvested portion of all stock-based awards was approximately $17.0 million, and is expected to be recognized over the remaining vesting period of the respective grants.

Note M — Fair Value of Financial Instruments

The Company measures and records financial instruments at fair value. A hierarchy is used for those instruments measured at fair value that distinguishes between assumptions based on market data (observable inputs) and the Company's assumptions (unobservable inputs). The hierarchy consists of three levels:

Level 1 — Quoted market prices in active markets for identical assets and liabilities;

Level 2 — Inputs other than Level 1 inputs that are either directly or indirectly observable; and

Level 3 — Unobservable inputs developed using estimates and assumptions developed by the Company, which reflect those that a market participant would use.

The following table summarizes the financial instruments measured at fair value in the Consolidated Balance Sheets as of September 29, 2023 and December 31, 2022:

	Total Carrying Value in the Consolidated Balance Sheets		Quoted Prices in Active Markets for Identical Assets (Level 1)		Significant Other Observable Inputs (Level 2)		Significant Unobservable Inputs (Level 3)	
(Thousands)	**2023**	2022	**2023**	2022	**2023**	2022	**2023**	2022
Financial Assets								
Deferred compensation investments	**$ 4,521**	$ 3,001	**$ 4,521**	$ 3,001	**$ —**	$ —	**$ —**	$ —
Foreign currency forward contracts	**1,643**	1,291	**—**	—	**1,643**	1,291	**—**	—
Interest rate swap	**10,438**	7,863	**—**	—	**10,438**	7,863	**—**	—
Precious metal swaps	**94**	118	**—**	—	**94**	118	**—**	—
Total	**$ 16,696**	$ 12,273	**$ 4,521**	$ 3,001	**$ 12,175**	$ 9,272	**$ —**	$ —
Financial Liabilities								
Deferred compensation liability	**$ 4,521**	$ 3,001	**$ 4,521**	$ 3,001	**$ —**	$ —	**$ —**	$ —
Foreign currency forward contracts	**776**	1,757	**—**	—	**776**	1,757	**—**	—
Interest Rate Swap	—	—		—	**—**	—		—
Precious metal swaps	**75**	411	—	—	**75**	411	—	—
Total	**$ 5,372**	$ 5,169	**$ 4,521**	$ 3,001	**$ 851**	$ 2,168	**$ —**	$ —

The Company uses a market approach to value the assets and liabilities for financial instruments in the table above. Outstanding contracts are valued through models that utilize market observable inputs, including both spot and forward prices, for the same underlying currencies, metals, and interest rates. The carrying values of the other working capital items and debt in the Consolidated Balance Sheets approximate fair values as of September 29, 2023 and December 31, 2022. The Company's deferred compensation investments and liabilities are based on the fair value of the investments corresponding to the employees' investment selections, primarily in mutual funds, based on quoted prices in active markets for identical assets. Deferred compensation investments are primarily presented in Other assets. Deferred compensation liabilities are primarily presented in Other long-term liabilities.

Note N — Derivative Instruments and Hedging Activity

The Company uses derivative contracts to hedge exposure to movements in interest rates associated with borrowings, foreign currency exposures, and precious metal and copper exposures. The objectives and strategies for using derivatives in these areas are as follows:

Interest Rate. On March 4, 2022, the Company entered into a $100.0 million interest rate swap to hedge the interest rate risk on the Credit Agreement described in Note P. The swap hedges the change in 1-month LIBOR from March 4, 2022 to November 2, 2026. On March 21, 2023, the Company entered into two $50.0 million interest rate swaps to hedge the interest rate risk on the Credit Agreement described in Note P. The swaps hedge the change in 1-month USD-SOFR. The purpose of this hedge is to manage the risk of changes in the monthly interest payments attributable to changes in the benchmark interest rate.

Foreign Currency. The Company sells a portion of its products to overseas customers in their local currencies, primarily the euro and yen. The Company secures foreign currency derivatives, mainly forward contracts and options, to hedge these anticipated sales transactions. The purpose of the hedge program is to protect against the reduction in the dollar value of foreign currency sales from adverse exchange rate movements. Should the dollar strengthen significantly, the decrease in the translated value of the foreign currency sales should be partially offset by gains on the hedge contracts. Depending upon the methods used, the hedge contracts may limit the benefits from a weakening U.S. dollar.

The use of forward contracts locks in a firm rate and eliminates any downside from an adverse rate movement as well as any benefit from a favorable rate movement. The Company may from time to time choose to hedge with options or a tandem of options, known as a collar. These hedging techniques can limit or eliminate the downside risk but can allow for some or all of the benefit from a favorable rate movement to be realized. Unlike a forward contract, a premium is paid for an option; collars, which are a combination of a put and call option, may have a net premium but can be structured to be cash neutral. The Company will primarily hedge with forward contracts due to the relationship between the cash outlay and the level of risk.

The use of foreign currency derivative contracts is governed by policies approved by the Audit Committee of the Board of Directors. A team consisting of senior financial managers reviews the estimated exposure levels, as defined by budgets, forecasts, and other internal data, and determines the timing, amounts, and nature of instruments to use to hedge exposures. Management analyzes the effective hedged rates and the actual and projected gains and losses on the hedging transactions against the program objectives, targeted rates, and levels of risk assumed. Foreign currency contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of market rate movements.

Precious Metals. The Company maintains the majority of its precious metal production requirements on consignment in order to reduce its working capital investment and the exposure to metal price movements. When a product containing precious metal is fabricated and delivered to the customer, the metal content is purchased out of consignment based on the current market price. The price paid by the Company for the precious metal forms the basis for the price charged to the customer for the metal content in the product. This methodology allows for changes in either direction in the market prices of the precious metals used by the Company to be passed through to the customer and reduces the impact changes in prices could have on the Company's margins and operating profit. The consigned metal is owned by precious metal consignors that charge the Company consignment fees based upon the value of the metal as it fluctuates while on consignment. Each precious metal consignor retains title to its consigned precious metal until it is purchased by the Company, and it is the Company’s typical practice to purchase metal out of consignment only after a product containing that metal has been purchased by one of our customers.

In certain instances, a customer may want to fix the price for the precious metal at the time the sales order is placed rather than at the time of shipment. Setting the sales price at a different date than when the material would be purchased out of consignment potentially creates an exposure to movements in the market price of the metal. Therefore, in these limited situations, the Company may elect to enter into a forward contract to purchase precious metal. The forward contract allows the Company to purchase metal at a fixed price on a specific future date. The price in the forward contract serves as the basis for the price to be charged to the customer. By doing so, the selling price and purchase price are matched, and the Company's price exposure is reduced.

The Company refines precious metal-containing materials for its customers and typically will purchase the refined metal from the customer at current market prices. In limited circumstances, the customer may want to fix the price to be paid at the time of the order as opposed to when the material is refined. The customer may also want to fix the price for a set period of time. The Company may then elect to enter into a hedge contract, either a forward contract or a swap, to fix the price for the estimated quantity of metal to be refined and purchased, thereby reducing the exposure to adverse movements in the price of the metal. The Company may also enter into hedges to mitigate the risk relating to the prices of the metals that we process or refine.

In certain circumstances, the Company also refines metal from the customer and may retain a portion of the refined metal as payment. The Company may elect to enter into a forward contract to sell precious metal to reduce the Company's price exposure in these instances.

The Company may, from time to time, elect to purchase precious metal and hold in inventory rather than on consignment due to potential credit line limitations or other factors. These purchases are infrequent and, when made are typically held for a short duration. A forward contract will be secured at the time of the purchase to fix the price to be paid when the metal is transferred back to the consignment line, thereby limiting any price exposure during the time when the metal was owned by the Company.

The Company will only enter into a derivative contract if there is an underlying identified exposure. Contracts are typically held to maturity. The Company does not engage in derivative trading activities and does not use derivatives for speculative purposes. The Company only uses hedge contracts that are denominated in the same currency or metal as the underlying exposure.

All derivatives are recorded on the balance sheet at fair value. If a derivative is designated and effective as a cash flow hedge, changes in the fair value of the derivative are recognized in other comprehensive income (OCI) and reclassified into income in the same period or periods during which the hedged transaction affects earnings. The ineffective portion of a derivative's fair value, if any, is recognized in earnings immediately. If a derivative is not a hedge, changes in the fair value are adjusted through income. The fair values of the outstanding derivatives are recorded on the balance sheet as assets (if the derivatives are in a gain position) or liabilities (if the derivatives are in a loss position). The derivative assets and liabilities are classified as short-term or long-term depending upon the contract maturity date.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives not designated as hedging instruments (on a gross basis) and the balance sheet classification as of September 29, 2023 and December 31, 2022:

	September 29, 2023		December 31, 2022	
(Thousands)	**Notional Amount**	**Fair Value**	Notional Amount	Fair Value
Foreign currency forward contracts				
Prepaid and other current assets	**$ 25,255**	**$ 924**	$ 12,242	$ 791
Other liabilities and accrued items	**16,142**	**675**	17,061	1,048

These outstanding foreign currency derivatives were related to balance sheet hedges and intercompany loans. Other-net included less than $0.1 million of foreign currency losses in the third quarter and $0.4 million of foreign currency losses related to derivatives in the first nine months of 2023, compared to less than $0.1 million of foreign currency losses and $0.7 million of foreign currency gains in the third quarter and first nine months of 2022, respectively.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives designated as cash flow hedges (on a gross basis) and balance sheet classification as of September 29, 2023 and December 31, 2022:

	September 29, 2023				
		Fair Value			
(Thousands)	Notional Amount	Prepaid and other current assets	Other assets	Other liabilities and accrued items	Other long-term liabilities
Foreign currency forward contracts - yen	**$ 1,873**	**$ 156**	**$ 6**	**$ —**	**$ —**
Foreign currency forward contracts - euro	**19,366**	**516**	**41**	**101**	**—**
Precious metal swaps	**4,049**	**84**	**10**	**75**	**—**
Interest rate swap	**200,000**	**5,047**	**5,391**	**—**	**—**
Total	**$ 225,288**	**$ 5,803**	**$ 5,448**	**$ 176**	**$ —**

	December 31, 2022				
		Fair Value			
	Notional Amount	Prepaid and other current assets	Other assets	Other liabilities and accrued items	Other long-term liabilities
Foreign currency forward contracts - yen	$ 2,985	$ 145	$ —	$ 74	$ 26
Foreign currency forward contracts - euro	25,712	355	—	472	137
Precious metal swaps	8,758	118	—	411	—
Interest rate swap	100,000	3,114	4,749	—	—
Total	$ 137,455	$ 3,732	$ 4,749	$ 957	$ 163

All of the contracts summarized above were designated and effective as cash flow hedges. We expect to reclassify $5.6 million of net gains into earnings in the next 12 months contemporaneously with the earnings effects of the related forecasted transactions. At September 29, 2023, the maximum term of derivative instruments that hedge forecasted transactions was approximately four years. Refer to Note K for further details related to OCI.

The following table summarizes the amounts reclassified from accumulated other comprehensive income relating to the Company's outstanding derivatives designated as cash flow hedges and associated income statement classification as of the third quarter and first nine months of 2023 and 2022:

		Third Quarter Ended	
(Thousands)		September 29, 2023	September 30, 2022
Hedging relationship	**Line item**		
Foreign currency forward contracts	Net sales	**$ —**	$ (41)
Precious metal swaps	Cost of sales	**83**	(126)
Interest rate swap	Interest expense - net	**(1,140)**	(115)
Total		**$ (1,057)**	$ (282)

		Nine Months Ended	
(Thousands)		**September 29, 2023**	September 30, 2022
Hedging relationship	**Line item**		
Foreign currency forward contracts	Net sales	**$ (35)**	$ (171)
Precious metal swaps	Cost of sales	**193**	(27)
Interest rate swap	Interest expense - net	**(2,950)**	238
Total		**$ (2,792)**	$ 40

Note O — Contingencies

Legal Proceedings. For general information regarding legal proceedings relating to Chronic Beryllium Disease Claims, refer to Note S "Contingencies and Commitments" in the Company's 2022 Annual Report on Form 10-K.

There were no pending beryllium cases as of September 29, 2023. One beryllium case that was settled in the second quarter of 2023 was dismissed with prejudice during the third quarter of 2023 after receiving court approval.

Other Litigation. The Company is party to several pending legal proceedings and claims arising in the normal course of business. The Company records a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. In the event the Company determines that a loss is not probable, but is reasonably possible, and it becomes possible to develop what the Company believes to be a reasonable range of possible loss, then the Company will include disclosure related to such matters. To the extent there is a reasonable possibility that the losses could exceed any amounts accrued, the Company will adjust the accrual in the period the determination is made, disclose an estimate of the additional loss or range of loss, indicate that the estimate is immaterial with respect to its financial statements as a whole or, if the amount of such adjustment cannot be reasonably estimated, disclose that an estimate cannot be made.

On October 14, 2020, Garett Lucyk, et al. v. Materion Brush Inc., et. al., case number 20CV0234, a wage and hour purported collective and class action, was filed in the Northern District of Ohio against the Company and its subsidiary, Materion Brush Inc. (collectively, the Company). Plaintiff, a former hourly production employee at the Company's Elmore, Ohio facility, alleges, among other things, that he and other similarly situated employees nationwide are not paid for all time they spend donning and doffing personal protective equipment in violation of the Fair Labor Standards Act and Ohio law. Plaintiff filed a motion for conditional certification, which the Company opposed. On August 2, 2022, the Court conditionally certified a class of employees at the Company's Elmore facility only and rejected certification of a class across the Company's other facilities. In November 2022, the parties reached a settlement for an immaterial amount. The Court preliminarily approved the settlement on March 30, 2023 and a final approval hearing was held on July 6, 2023. There were no objections to the settlement and the Court entered an order approving the final settlement on July 7, 2023, and the settlement amount was subsequently paid out prior to the end of the third quarter.

Environmental Proceedings. The Company has an active environmental compliance program and records reserves for the probable cost of identified environmental remediation projects. The reserves are established based upon analyses conducted by the Company's engineers and outside consultants and are adjusted from time to time based upon ongoing studies, the difference between actual and estimated costs, and other factors. The reserves may also be affected by rulings and negotiations with regulatory agencies. The undiscounted reserve balance was $4.4 million and $4.5 million at September 29, 2023 and December 31, 2022, respectively, and is included in Other liabilities and accrued items and Other long-term liabilities on the Consolidated Balance Sheet. Environmental projects tend to be long-term, and the final actual remediation costs may differ from the amounts currently recorded.

Note P — Debt

(Thousands)	September 29, 2023	December 31, 2022
Borrowings under Credit Agreement	$ 176,750	$ 143,250
Borrowings under the Term Loan Facility	273,750	285,000
Overdraft Sweep Facility	6,848	—
Foreign debt	6,714	7,541
Total debt outstanding	464,062	435,791
Current portion of long-term debt	(38,634)	(21,105)
Gross long-term debt	425,428	414,686
Unamortized deferred financing fees	(3,067)	(3,810)
Long-term debt	$ 422,361	$ 410,876

As of September 29, 2023 and December 31, 2022, the Company had $176.8 million outstanding at an average interest rate of 6.92% and $143.3 million outstanding at an average interest rate of 6.08%, respectively, under its revolving credit facility. The available borrowing capacity under the revolving credit facility as of September 29, 2023 was $151.0 million. The Company has the option to repay or borrow additional funds under the revolving credit facility until the maturity date in 2026. The amended and restated credit agreement governing the revolving credit facility (Credit Agreement) includes covenants subject to a maximum leverage ratio and a minimum fixed charge coverage ratio. We were in compliance with all of our debt covenants as of September 29, 2023.

The balance outstanding on the term loan facility as of September 29, 2023 and December 31, 2022 was $273.8 million and $285.0 million, respectively.

At September 29, 2023 and December 31, 2022, there was $47.3 million and $46.5 million, respectively, outstanding against the letters of credit sub-facility.

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

OVERVIEW

We are an integrated producer of high-performance advanced engineered materials used in a variety of electronic, thermal, and structural applications. Our products are sold into numerous end markets, including semiconductor, industrial, aerospace and defense, automotive, consumer electronics, energy, and telecom and data center.

RESULTS OF OPERATIONS

Third Quarter

	Third Quarter Ended			
(Thousands, except per share data)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ 403,067**	$ 428,191	$ (25,124)	(6)%
Value-added sales	**270,532**	283,497	(12,965)	(5)%
Gross margin	**88,936**	82,743	6,193	7 %
Gross margin as a % of value-added sales	**33 %**	29 %		
Selling, general, and administrative (SG&A) expense	**38,806**	38,958	(152)	— %
SG&A expense as a % of value-added sales	**14 %**	14 %		
Research and development (R&D) expense	**6,322**	7,430	(1,108)	(15)%
R&D expense as a % of value-added sales	**2 %**	3 %		
Restructuring expense	**1,077**	484	593	123 %
Other—net	**6,211**	6,774	(563)	(8)%
Operating profit	**36,520**	29,097	7,423	26 %
Other non-operating (income)—net	**(685)**	(1,175)	490	(42)%
Interest expense—net	**7,678**	5,888	1,790	30 %
Income before income taxes	**29,527**	24,384	5,143	21 %
Income tax expense	**2,963**	4,432	(1,469)	(33)%
Net income	**$ 26,564**	$ 19,952	$ 6,612	33 %
Diluted earnings per share	**$ 1.27**	$ 0.96	$ 0.31	32 %

Net sales of $403.1 million in the third quarter of 2023 decreased $25.1 million from $428.2 million in the third quarter of 2022. A decrease in net sales in the Electronic Materials and Precision Optics segments were partially offset by increased net sales in the Performance Materials segment. Volume decreases in the semiconductor (18%), industrial (19%), automotive (18%) and medical (37%) end markets were partially offset by an increase the aerospace and defense (19%) end market, as well as incremental sales from the clad strip project of $28.2 million. See Note B to the Consolidated Financial Statements for additional details on the year over year changes in our net sales by segment and market.

The change in precious metal and copper prices favorably impacted net sales by $3.1 million during the third quarter of 2023 compared to prior year quarter.

Value-added sales is a non-GAAP financial measure that removes the impact of pass-through metal costs and allows for analysis without the distortion of the movement or volatility in precious metal market prices and changes in mix due to customer-supplied material. Internally, we manage our business on this basis, and a reconciliation of net sales, the most directly comparable GAAP financial measure, to value-added sales is included herein. Value-added sales of $270.5 million in the third quarter of 2023 decreased $13.0 million, or 5%, compared to the third quarter of 2022. Volume decreases in the semiconductor (33%) and industrial (19%) end markets were partially offset by an increase in the aerospace and defense end market (27%) and incremental sales from the clad strip project of $28.2 million.

Gross margin in the third quarter of 2023 was $88.9 million, which was up 7% compared to the third quarter of 2022. Gross margin expressed as a percentage of value-added sales increased to 33% in the third quarter of 2023 from 29% in the third quarter of 2022. The production tax credit recorded in the third quarter of 2023 favorably impacted gross margin. See Note F to the Consolidated Financial Statements for further discussion.

SG&A expense was $38.8 million in the third quarter of 2023, compared to $39.0 million in the third quarter of 2022. SG&A expense remained relatively flat and expressed as a percentage of value-added sales was 14% for both the third quarter of 2023 and 2022.

R&D expense consists primarily of direct personnel costs for product innovation including pre-production development, evaluation, and testing of new products, prototypes, and applications to deliver new high performing advanced materials to our customers. R&D expense as a percent of value-added sales decreased slightly from 3% in the third quarter of 2022 to 2% in the third quarter of 2023.

Restructuring expense consists primarily of cost reduction actions taken in order to reduce our fixed cost structure. In the third quarter of 2023, we recorded $1.1 million of restructuring charges primarily in our Electronic Materials segment. In the third quarter of 2022, we recorded $0.5 million of restructuring charges primarily in our Precision Optics segment. See Note D to the Consolidated Financial Statements for further discussion.

Other-net was $6.2 million of expense in the third quarter of 2023, or a $0.6 million decrease from the third quarter of 2022. Refer to Note E to the Consolidated Financial Statements for details of the major components within Other-net.

Other non-operating (income)-net includes components of pension and post-retirement expense other than service costs. Refer to Note J to the Consolidated Financial Statements for details of the components.

Interest expense-net was $7.7 million and $5.9 million in the third quarter of 2023 and 2022, respectively. The increase in interest expense is primarily due to an increase in interest rates compared to the prior year period.

Income tax expense for the third quarter of 2023 was $3.0 million, compared to $4.4 million in the third quarter of 2022. The effective tax rate for the third quarter of 2023 and 2022 was 10.0% and 18.2%, respectively. The effective tax rate for 2023 was lower than the statutory tax rate primarily due to the impact of the foreign derived intangible income deduction, percentage depletion, research and development and production credits. The effective tax rate for 2022 was lower than the statutory tax rate primarily due to the impact of percentage depletion, research and development credits and the foreign-derived intangible income deduction. See Note F to the Consolidated Financial Statements for additional discussion.

Nine Months

	Nine Months Ended			
(Thousands, except per share data)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ 1,244,144**	$ 1,322,531	$ (78,387)	(6)%
Value-added sales	**837,351**	811,417	25,934	3 %
Gross margin	**269,327**	245,461	23,866	10 %
Gross margin as a % of value-added sales	**32 %**	30 %		
SG&A expense	**118,053**	122,666	(4,613)	(4)%
SG&A expense as a % of value-added sales	**14 %**	15 %		
R&D expense	**21,098**	22,096	(998)	(5)%
R&D expense as a % of value-added sales	**3 %**	3 %		
Restructuring (income) expense	**3,194**	1,560	1,634	105 %
Other—net	**18,178**	18,575	(397)	(2)%
Operating profit	**108,804**	80,564	28,240	35 %
Other non-operating (income)—net	**(2,141)**	(3,512)	1,371	(39)%
Interest expense—net	**22,820**	14,325	8,495	59 %
Income before income taxes	**88,125**	69,751	18,374	26 %
Income tax expense	**11,891**	12,525	(634)	(5)%
Net income	**$ 76,234**	$ 57,226	$ 19,008	33 %
Diluted earnings per share	**$ 3.65**	$ 2.76	$ 0.89	32 %

Net sales of $1,244.1 million in the first nine months of 2023 decreased $78.4 million from $1,322.5 million in the first nine months of 2022. Decreases in net sales in the Electronic Materials and Precision Optics segments were partially offset by increased net sales in the Performance Materials segment. Volume decreases in the semiconductor (20%), industrial (13%) and consumer electronics (27%) end markets were partially offset by an increase in the aerospace and defense end market (19%) and incremental sales from the clad strip project of $91.4 million when compared to the first nine months of 2022. Additionally, there was a $2.4 million year over year decrease in raw material beryllium hydroxide sales compared to the first nine months of 2022. See Note B to the Consolidated Financial Statements for additional details on the year over year changes in our net sales by segment and market.

The change in precious metal and copper market prices unfavorably impacted net sales by $2.9 million during the first nine months of 2023 compared to the same period in the prior year.

Value-added sales of $837.4 million in the first nine months of 2023 increased $25.9 million, or 3%, compared to the first nine months of 2022. Despite the decrease in net sales, value-added sales increased due to a shift in mix to higher non-precious metal sales versus precious metal sales commensurate with an increase in value-added sales into the aerospace and defense (23%) end market as well as $91.4 million of incremental sales from the clad strip project. These increases were slightly offset by a $2.4 million decrease in the volume of raw material beryllium hydroxide sales in the first nine months of 2023 when compared to the first nine months of 2022 as well as lower value-added sales into the semiconductor (20%), industrial (7%) and consumer electronics (27%) end markets.

Gross margin in the first nine months of 2023 was $269.3 million, an increase of 10% compared to the first nine months of 2022. Gross margin expressed as a percentage of value-added sales increased to 32% in the first nine months of 2023 from 30% in the first nine months of 2022. Gross margin increased from the prior year period primarily due to $7.5 million of inventory step up amortization from the HCS-Electronic Material acquisition that was recorded during the first quarter of 2022 that did not recur in 2023. In addition, the production tax credit recorded in the first nine months of 2023 favorably impacted gross margin. See Note F to the Consolidated Financial Statements for further discussion.

SG&A expense was $118.1 million in the first nine months of 2023, compared to $122.7 million in the first nine months of 2022. The decrease in SG&A expense for the first nine months of 2023 was primarily driven by $4 million of merger and acquisition costs related to the acquisition of HCS-Electronic Materials incurred in the first nine months of 2022 that did not recur in 2023 as well as lower selling related expenses associated with the decrease in value-added sales. Expressed as a percentage of value-added sales, SG&A expense was 14% and 15% in the first nine months of 2023 and 2022, respectively.

R&D expense consists primarily of direct personnel costs for product innovation including pre-production development, evaluation, and testing of new products, prototypes, and applications to deliver new high performing advanced materials to our customers. R&D expense accounted for 3% of value-added sales in the first nine months of both 2023 and 2022.

Restructuring (income) expense consists primarily of cost reduction actions taken in order to reduce our fixed cost structure. In the first nine months of 2023, we recorded a combined total of $3.2 million of restructuring charges in our Electronic Materials, Precision Optics, Performance Materials and Other segments. In the first nine months of 2022, we recorded a combined total of $1.6 million of restructuring charges in our Precision Optics, Electronic Materials and Other segments. Refer to Note D to the Consolidated Financial Statements for details.

Other-net was $18.2 million of expense in the first nine months of 2023, or a $0.4 million decrease from the first nine months of 2022. Refer to Note E to the Consolidated Financial Statements for details of the major components within Other-net.

Other non-operating (income)-net includes components of pension and post-retirement expense other than service costs. Refer to Note J to the Consolidated Financial Statements for details of the components.

Interest expense-net was $22.8 million and $14.3 million in the first nine months of 2023 and 2022, respectively. The increase in interest expense is primarily due to an increase in interest rates compared to the prior year period.

Income tax expense for the first nine months of 2023 was $11.9 million, compared to $12.5 million in the nine months of 2022. The Company's effective tax rate for the first nine months of 2023 and 2022 was 13.5% and 18.0%, respectively. The effective tax rate for 2023 was lower than the statutory tax rate primarily due to the impact of percentage depletion, research and development and production credits and the foreign derived intangible income deduction. The effective tax rate for 2022 was lower than the statutory tax rate primarily due to the impact of percentage depletion, research and development credits and the foreign-derived intangible income deduction. The effective tax rate for the first nine months of 2023 included a net discrete income tax benefit of $3.4 million, primarily related to excess tax benefits from stock-based compensation awards, return to provision adjustments and an optimization of our foreign-derived intangible income deduction benefit. The effective tax rate for the first nine months of 2022 included a net discrete income tax benefit of $0.9 million, primarily related to excess tax benefits from stock-based compensation awards and return to provision adjustments.

Value-Added Sales - Reconciliation of Non-GAAP Financial Measure

A reconciliation of net sales to value-added sales, a non-GAAP financial measure, for each reportable segment and for the total Company for the third quarter and first nine months of 2023 and 2022 is as follows:

	Third Quarter Ended		Nine Months Ended	
(Thousands)	**September 29, 2023**	September 30, 2022	**September 29, 2023**	September 30, 2022
Net sales				
Performance Materials	**$ 184,642**	$ 169,357	**$ 554,427**	$ 473,876
Electronic Materials	**192,305**	230,841	**611,855**	762,649
Precision Optics	**26,120**	27,993	**77,862**	86,006
Other	**—**	—	**—**	—
Total	**$ 403,067**	$ 428,191	**$ 1,244,144**	$ 1,322,531
Less: pass-through metal costs				
Performance Materials	**$ 15,748**	$ 20,525	**$ 51,906**	$ 61,959
Electronic Materials	**116,772**	123,905	**354,829**	447,719
Precision Optics	**15**	16	**58**	83
Other	**—**	248	**—**	1,353
Total	**$ 132,535**	$ 144,694	**$ 406,793**	$ 511,114
Value-added sales				
Performance Materials	**$ 168,894**	$ 148,832	**$ 502,521**	$ 411,917
Electronic Materials	**75,533**	106,936	**257,026**	314,930
Precision Optics	**26,105**	27,977	**77,804**	85,923
Other	**—**	(248)	**—**	(1,353)
Total	**$ 270,532**	$ 283,497	**$ 837,351**	$ 811,417

Internally, management reviews net sales on a value-added basis. Value-added sales is a non-GAAP financial measure that deducts the value of the pass-through precious metal market costs from net sales. Value-added sales allow management to assess the impact of differences in net sales between periods, segments, or markets, and analyze the resulting margins and profitability without the distortion of movements in pass-through market metal costs. The dollar amount of gross margin and operating profit is not affected by the value-added sales calculation. We sell other metals and materials that are not considered direct pass-throughs, and these costs are not deducted from net sales when calculating value-added sales. Non-GAAP financial measures, such as value-added sales, have inherent limitations and should not be considered in isolation, or as a substitute for analyses of results as reported under GAAP.

The cost of gold, silver, platinum, palladium, copper, ruthenium, iridium, rhodium, rhenium, and osmium can be quite volatile. Our pricing policy is to directly pass the market cost of these metals on to the customer in order to mitigate the impact of metal price volatility on our results from operations. Trends and comparisons of net sales are affected by movements in the market prices of these metals, but changes in net sales due to metal price movements may not have a proportionate impact on our profitability.

Our net sales are also affected by changes in the use of customer-supplied metal. When we manufacture a precious metal product, the customer may purchase metal from us or may elect to provide its own metal, in which case we process the metal on a toll basis and the metal value does not flow through net sales or cost of sales. In either case, we generally earn our margin based upon our fabrication efforts. The relationship of this margin to net sales can change depending upon whether or not the product was made from our metal or the customer's metal. The use of value-added sales removes the potential distortion in the comparison of net sales caused by changes in the level of customer-supplied metal.

By presenting information on net sales and value-added sales, it is our intention to allow users of our financial statements to review our net sales with and without the impact of the pass-through metals.

Segment Results

The Company consists of four reportable segments: Performance Materials, Electronic Materials, Precision Optics, and Other. The Other reportable segment includes unallocated corporate costs.

Performance Materials

Third Quarter

	Third Quarter Ended			
(Thousands)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ 184,642**	$ 169,357	$ 15,285	9 %
Value-added sales	**168,894**	148,832	20,062	13 %
EBITDA	**46,366**	28,866	17,500	61 %

Net sales from the Performance Materials segment of $184.6 million in the third quarter of 2023 increased 9% compared to net sales of $169.4 million in the third quarter of 2022. The increase in sales was due to incremental sales from the clad strip project of $28.2 million and increased volumes in the aerospace and defense end market (9%). This increase was partially offset by decreased volumes in the automotive (22%) and industrial (28%) end markets.

Value-added sales of $168.9 million in the third quarter of 2023 were 13% higher than value-added sales of $148.8 million in the third quarter of 2022. The increase in value-added sales was due to the same factors driving the increase in net sales.

EBITDA for the Performance Materials segment was $46.4 million in the third quarter of 2023, compared to $28.9 million in the third quarter of 2022. The increase in EBITDA in the third quarter of 2023 was primarily due to the same factors driving increases in net sales, manufacturing efficiencies and the $1.6 million of startup costs and $4.1 million of additional resource cost and scrap for the new wide area precision strip clad facility incurred in the third quarter of the prior year that did not recur in the third quarter of 2023. In addition, we recorded a portion of the expected $10 million annual benefit from the production credit in the third quarter of 2023, which favorably impacted EBITDA. See Note F to the Consolidated Financial Statements for further discussion.

Nine Months

	Nine Months Ended			
(Thousands)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ 554,427**	$ 473,876	$ 80,551	17 %
Value-added sales	**502,521**	411,917	90,604	22 %
EBITDA	**134,061**	80,886	53,175	66 %

Net sales from the Performance Materials segment of $554.4 million in the first nine months of 2023 increased 17% compared to net sales of $473.9 million in the first nine months of 2022. The increase in sales was primarily due to incremental sales from the clad strip project of $91.4 million as well an increase in the aerospace and defense (17%) end market, partially offset by decreases in the industrial (8%) and consumer electronics (22%) end markets when compared to the first nine months of 2022. Additionally, there was a $2.4 million year over year decrease in raw material beryllium hydroxide sales compared to the first nine months of 2022.

Value-added sales of $502.5 million in the first nine months of 2023 were 22% higher than value-added sales of $411.9 million in the first nine months of 2022. The increase in value-added sales was due to the same factors driving the increase in net sales.

EBITDA for the Performance Materials segment was $134.1 million in the first nine months of 2023 compared to $80.9 million in the first nine months of 2022. The increase in EBITDA was primarily due to the same factors driving increases in net sales, manufacturing efficiencies and due to the $9.8 million of startup costs and $4.1 million of additional resource cost and scrap for the new wide area precision strip clad facility incurred in the prior year period and $2.7 million of merger and acquisition costs incurred in the prior year period that did not recur in 2023. In addition, we recorded a portion of the expected $10 million annual benefit from the production credit in the first nine months of 2023, which favorably impacted EBITDA. See Note F to the Consolidated Financial Statements for further discussion.

Electronic Materials

Third Quarter

	Third Quarter Ended			
(Thousands)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ 192,305**	$ 230,841	$ (38,536)	(17)%
Value-added sales	**75,533**	106,936	(31,403)	(29)%
EBITDA	**10,155**	16,853	(6,698)	(40)%

Net sales from the Electronic Materials segment of $192.3 million in the third quarter of 2023 were 17% lower than net sales of $230.8 million in the third quarter of 2022. The decrease in net sales was primarily due to lower sales volumes in the semiconductor (18%) end market.

Value-added sales of $75.5 million in the third quarter of 2023 decreased 29% compared to value-added sales of $106.9 million in the third quarter of 2022. The decrease in value-added sales was due to the same factors driving the decrease in net sales.

EBITDA for the Electronic Materials segment was $10.2 million in the third quarter of 2023 compared to $16.9 million in the third quarter of 2022. The decrease in EBITDA was due to decreased sales volumes, partially offset by decreases in manufacturing and SG&A expenses as a result of various targeted cost control initiatives implemented in the second quarter of 2023.

Nine Months

	Nine Months Ended			
(Thousands)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ 611,855**	$ 762,649	$ (150,794)	(20)%
Value-added sales	**257,026**	314,930	(57,904)	(18)%
EBITDA	**37,504**	51,338	(13,834)	(27)%

Net sales from the Electronic Materials segment of $611.9 million in the first nine months of 2023 were 20% lower than net sales of $762.6 million in the first nine months of 2022. The decrease in net sales was primarily due to lower sales volumes in the semiconductor (21%) end market. Additionally, pass-through metal price fluctuations reduced net sales by $3.5 million compared to the first nine months of 2022.

Value-added sales of $257.0 million in the first nine months of 2023 decreased 18% compared to value-added sales of $314.9 million in the first nine months of 2022. The decrease in value-added sales was due to the same factors driving the decrease in net sales.

EBITDA for the Electronic Materials segment was $37.5 million in the first nine months of 2023 compared to $51.3 million in the first nine months of 2022. The decrease in EBITDA was due to decreased sales volumes, partially offset by decreases in manufacturing and SG&A expenses as a result of various targeted cost control initiatives implemented in 2023 as well as lower merger and acquisition costs of $6.8 million incurred in the prior year period that did not recur in 2023.

Precision Optics

Third Quarter

(Thousands)	Third Quarter Ended September 29, 2023	September 30, 2022	$ Change	% Change
Net sales	$ **26,120**	$ 27,993	$ (1,873)	(7)%
Value-added sales	**26,105**	27,977	(1,872)	(7)%
EBITDA	**3,261**	3,546	(285)	(8)%

Net sales from the Precision Optics segment of $26.1 million in the third quarter of 2023 decreased 7% compared to net sales of $28.0 million in the third quarter of 2022. The decrease was primarily due to lower sales volumes as a result of a reduction in sales related to COVID-19 PCR testing programs as well as decreased sales in the consumer electronics end market (37%), which was primarily due to the discontinuation of a consumer electronic application. These decreases were partially offset by an increase in sales volumes in the aerospace and defense (102%) end market.

Value-added sales of $26.1 million in the third quarter of 2023 decreased 7% compared to value-added sales of $28.0 million in the third quarter of 2022. The decrease in value-added sales was due to the same factors driving the decrease in net sales.

EBITDA for the Precision Optics segment was $3.3 million in the third quarter of 2023 compared to $3.5 million in the third quarter of 2022. The decrease in EBITDA was driven by decreased volumes, partially offset by targeted cost control initiatives implemented in 2023.

Nine Months

(Thousands)	Nine Months Ended September 29, 2023	September 30, 2022	$ Change	% Change
Net sales	$ **77,862**	$ 86,006	$ (8,144)	(9)%
Value-added sales	**77,804**	85,923	(8,119)	(9)%
EBITDA	**7,654**	9,281	(1,627)	(18)%

Net sales from the Precision Optics segment of $77.9 million in the first nine months of 2023 decreased 9% compared to net sales of $86.0 million in the first nine months of 2022. The decrease was primarily due to lower sales volumes as a result of a reduction in sales related to COVID-19 PCR testing programs as well as decreased sales in the consumer electronics end market (38%), which was primarily due to the discontinuation of a consumer electronic application. These decreases were partially offset by an increase in sales volumes in the aerospace and defense (44%) end market.

Value-added sales of $77.8 million in the first nine months of 2023 decreased 9% compared to value-added sales of $85.9 million in the first nine months of 2022. The decrease in value-added sales was due to the same factors driving the decrease in net sales.

EBITDA for the Precision Optics segment was $7.7 million in the first nine months of 2023 compared to $9.3 million in the first nine months of 2022. The decrease in EBITDA was driven by decreased volumes partially offset by targeted cost control initiatives implemented in 2023.

Other

Third Quarter

(Thousands)	Third Quarter Ended September 29, 2023	September 30, 2022	$ Change	% Change
Net sales	$ **—**	$ —	$ —	— %
Value-added sales	**—**	(248)	248	(100)%
EBITDA	**(7,497)**	(5,839)	(1,658)	28 %

The Other reportable segment in total includes unallocated corporate costs.

Corporate costs were $7.5 million in the third quarter of 2023 compared to $5.8 million in the third quarter of 2022. Corporate costs increased from 2% of Company-wide value-added sales in the third quarter of 2022 to 3% in the third quarter of 2023. The increase in corporate costs in the third quarter of 2023 compared to the third quarter of 2022 is primarily driven by changes in variable-based compensation and incentives.

Nine Months

	Nine Months Ended			
(Thousands)	**September 29, 2023**	September 30, 2022	$ Change	% Change
Net sales	**$ —**	$ —	$ —	— %
Value-added sales	**—**	(1,353)	1,353	(100)%
EBITDA	**(21,750)**	(18,206)	(3,544)	19 %

Corporate costs were $21.8 million in the first nine months of 2023 compared to $18.2 million in the first nine months of 2022. Corporate costs increased from 2% of Company-wide value-added sales in the first nine months of 2022 to 3% in the first nine months of 2023. The increase in corporate costs in the first nine months of 2023 compared to the first nine months of 2022 is primarily driven by changes in variable-based compensation and incentives.

FINANCIAL POSITION

Cash Flow

A summary of cash flows provided by (used in) operating, investing, and financing activities is as follows:

	Nine Months Ended		
(Thousands)	**September 29, 2023**	September 30, 2022	$ Change
Net cash provided by operating activities	**$ 84,505**	$ 34,204	$ 50,301
Net cash used in investing activities	**(94,160)**	(56,380)	(37,780)
Net cash provided by financing activities	**13,735**	31,349	(17,614)
Effects of exchange rate changes	**(780)**	(2,953)	2,173
Net change in cash and cash equivalents	**$ 3,300**	$ 6,220	$ (2,920)

Net cash provided by operating activities totaled $84.5 million in the first nine months of 2023 versus $34.2 million in the prior-year period. The period over period increase in cash provided by operating activities from the prior year period was primarily due to increased net earnings as well as favorable changes in working capital, primarily inventory and accounts receivable, primarily due to working capital initiatives during 2023.

Net cash used in investing activities was $94.2 million in the first nine months of 2023 compared to $56.4 million in the prior-year period. The increase in cash used in investing activities is due to increased capital expenditures and mine development, as expected, to support continued business growth.

Capital expenditures are made primarily for new product development, replacing and upgrading equipment, infrastructure investments, and implementing information technology initiatives. For the full year 2023, the Company expects payments for property, plant, and equipment to be approximately $105 million.

Net cash provided by financing activities totaled $13.7 million in the first nine months of 2023 and $31.3 million in the comparable prior-year period. The decrease is primarily due to a decrease in borrowings under our revolving credit facilities in the first nine months of 2023 of $39.6 million, compared to net borrowings of $55.7 million in the same period in the prior year.

Liquidity

We believe cash flow from operations plus the available borrowing capacity and our current cash balance are adequate to support operating requirements, capital expenditures, projected pension plan contributions, the current dividend program, environmental remediation projects, and strategic acquisitions for at least the next twelve months and for the foreseeable future thereafter. At September 29, 2023, cash and cash equivalents held by our foreign operations totaled $15.8 million. We do not expect restrictions on repatriation of cash held outside of the United States to have a material effect on our overall liquidity, financial condition, or results of operations for the foreseeable future.

A summary of key data relative to our liquidity, including outstanding debt, cash, and available borrowing capacity, as of September 29, 2023 and December 31, 2022 is as follows:

(Thousands)	**September 29, 2023**	December 31, 2022
Cash and cash equivalents	**$ 16,401**	$ 13,101
Total outstanding debt	**460,995**	431,981
Net debt	**$ (444,594)**	$ (418,880)
Available borrowing capacity	**$ 150,996**	$ 185,294

Net debt is a non-GAAP financial measure. We are providing this information because we believe it is more indicative of our overall financial position. It is also a measure our management uses to assess financing and other decisions. We believe that based on our typical cash flow generated from operations, we can support a higher leverage ratio in future periods.

The available borrowing capacity in the table above represents the additional amounts that could be borrowed under our revolving credit facility and other secured lines existing as of the end of each period depicted. The applicable debt covenants have been taken into account when determining the available borrowing capacity, including the covenant that restricts the borrowing capacity to a multiple of the twelve-month trailing earnings before interest, income taxes, depreciation, depletion and amortization, and other adjustments.

In January 2023, we amended the agreement governing our $375.0 million revolving credit facility and term loan facility (Credit Agreement).

Pursuant to the amendment, we transitioned U.S. dollar denominated borrowings from LIBOR to SOFR for both the revolving credit agreement and the term loan and increased the cap on precious metals consignment line from $600 million to $615 million.

The Company had previously amended and restated the Credit Agreement in connection with the HCS-Electronic Materials acquisition in November 2021. A $300 million delayed draw term loan facility was added to the Credit Agreement and the maturity date of the Credit Agreement was extended from 2024 to 2026. Moreover, the Credit Agreement also provides for an uncommitted incremental facility whereby, under certain conditions, the Company may be able to borrow additional term loans in an aggregate amount not to exceed $150.0 million. The Credit Agreement provides the Company and its subsidiaries with additional capacity to enter into facilities for the consignment of precious metals and copper, and provides enhanced flexibility to finance acquisitions and other strategic initiatives. Borrowings under the Credit Agreement are secured by substantially all of the assets of the Company and its direct subsidiaries, with the exception of non-mining real property, precious metal, copper and certain other assets.

The Credit Agreement allows the Company to borrow money at a premium over SOFR, following the January 2023 amendment or prime rate and at varying maturities. The premium resets quarterly according to the terms and conditions stipulated in the agreement. The Credit Agreement includes restrictive covenants relating to restrictions on additional indebtedness, acquisitions, dividends, and stock repurchases. In addition, the Credit Agreement includes covenants that limit the Company to a maximum leverage ratio and a minimum interest coverage ratio. We were in compliance with all of our debt covenants as of September 29, 2023 and December 31, 2022. Cash on hand up to $25.0 million can benefit the covenants and may benefit the borrowing capacity under the Credit Agreement.

In November 2021, we completed the acquisition of HCS-Electronic Materials. The Company financed the purchase price for the HCS-Electronic Materials acquisition with a new $300.0 million five-year term loan pursuant to its delayed draw term loan facility under the Credit Agreement and $103.0 million of borrowings under its amended revolving credit facility. The interest rate for the term loan is based on SOFR, following the January 2023 amendment, plus a tiered rate determined by the Company's quarterly leverage ratio.

Portions of our business utilize off-balance sheet consignment arrangements allowing us to use metal owned by precious metal consignors as we manufacture product for our customers. Metal is purchased from the precious metal consignor and sold to our customer at the time of product shipment. Expansion of business volumes and/or higher metal prices can put pressure on the consignment line limitations from time to time. In August 2022, we entered into a precious metals consignment agreement, maturing on August 31, 2025, which replaced the consignment agreements that would have matured on August 27, 2022. The available and unused capacity under the metal consignment agreements expiring in August 2025 totaled approximately $270.2 million as of September 29, 2023, compared to $241.9 million as of December 31, 2022. The availability is determined by Board approved levels and actual capacity.

In January 2014, our Board of Directors approved a plan to repurchase up to $50.0 million of our common stock. The timing of the share repurchases will depend on several factors, including market and business conditions, our cash flow, debt levels, and other investment opportunities. There is no minimum quantity requirement to repurchase our common stock for a given year, and the repurchases may be discontinued at any time. We did not repurchase any shares under this program in the third quarter or first nine months of 2023. Since the approval of the repurchase plan, we have purchased 1,254,264 shares at a total cost of $41.7 million.

We paid cash dividends of $2.7 million and $7.9 million on our common stock in the third quarter and first nine months of 2023, respectively. We intend to pay a quarterly dividend on an ongoing basis, subject to a determination that the dividend remains in the best interest of our shareholders.

OFF-BALANCE SHEET ARRANGEMENTS AND CASH OBLIGATIONS

We maintain the majority of the precious metals and portions of the copper we use in production on a consignment basis in order to reduce our exposure to metal price movements and to reduce our working capital investment. The notional value of off-balance sheet precious metals and copper was $344.8 million and $373.1 million as of September 29, 2023 and December 31, 2022, respectively. We were in compliance with all of the covenants contained in the consignment agreements as of September 29, 2023. For additional information on our material cash obligations, refer to our 2022 Annual Report on Form 10-K.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires the inherent use of estimates and management's judgment in establishing those estimates. For additional information regarding critical accounting policies, please refer to our 2022 Annual Report on Form 10-K.

Forward-looking Statements: *Portions of the narrative set forth in this document that are not statements of historical or current facts are forward-looking statements. Our actual future performance may materially differ from that contemplated by the forward-looking statements as a result of a variety of factors. These factors include, in addition to those mentioned elsewhere herein: the global economy, including inflationary pressures, potential future recessionary conditions and the impact of tariffs and trade agreements; the impact of any U.S. Federal Government shutdowns or sequestrations; the condition of the markets which we serve, whether defined geographically or by segment; changes in product mix and the financial condition of customers; our success in developing and introducing new products and new product ramp-up rates; our success in passing through the costs of raw materials to customers or otherwise mitigating fluctuating prices for those materials, including the impact of fluctuating prices on inventory values; our success in identifying acquisition candidates and in acquiring and integrating such businesses; the impact of the results of acquisitions on our ability to fully achieve the strategic and financial objectives related to these acquisitions; our success in implementing our strategic plans and the timely and successful start-up and completion of any capital projects; other financial and economic factors, including the cost and availability of raw materials (both base and precious metals), physical inventory valuations, metal consignment fees, tax rates, exchange rates, interest rates, pension costs and required cash contributions and other employee benefit costs, energy costs, regulatory compliance costs, the cost and availability of insurance, credit availability, and the impact of the Company's stock price on the cost of incentive compensation plans; the uncertainties related to the impact of war, terrorist activities, and acts of God; changes in government regulatory requirements and the enactment of new legislation that impacts our obligations and operations; the conclusion of pending litigation matters in accordance with our expectation that there will be no material adverse effects; the disruptions in operations from, and other effects of, catastrophic and other extraordinary events including outbreaks of infectious diseases and the conflict between Russia and Ukraine and other hostilities; realization of expected financial benefits expected from the Inflation Reduction Act of 2022; and the risk factors set forth in Part 1, Item 1A of the Company's 2022 Annual Report on Form 10-K.*

Item 3. Quantitative and Qualitative Disclosures about Market Risk

For information regarding market risks, refer to Item 7A. Quantitative and Qualitative Disclosures About Market Risk in our 2022 Annual Report on Form 10-K. There have been no material changes in our market risks since the inclusion of this discussion in our 2022 Annual Report on Form 10-K.

Item 4. Controls and Procedures

a) Evaluation of Disclosure Controls and Procedures

The Company carried out an evaluation under the supervision and with participation of the Company's management, including the chief executive officer and chief financial officer, of the effectiveness of the design and operation of disclosure controls and procedures as of September 29, 2023 pursuant to Rule 13a-15(b) and 15d-15(b) under the Securities Exchange Act of 1934, as amended (Exchange Act). Based on that evaluation, management, including the chief executive officer and chief financial officer, concluded that disclosure controls and procedures are effective as of September 29, 2023.

b) Changes in Internal Control over Financial Reporting

There have been no changes in the Company's internal control over financial reporting that occurred during the quarter ended September 29, 2023 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

PART II OTHER INFORMATION

Item 1. Legal Proceedings

Our subsidiaries and our holding company are subject, from time to time, to a variety of civil and administrative proceedings arising out of our normal operations, including, without limitation, product liability claims, health, safety, and environmental claims, and employment-related actions. Among such proceedings are cases alleging that plaintiffs have contracted, or have been placed at risk of contracting, beryllium sensitization or chronic beryllium disease or other lung conditions as a result of exposure to beryllium (beryllium cases). The plaintiffs in beryllium cases seek recovery under negligence and various other legal theories and demand compensatory and often punitive damages, in many cases of an unspecified sum. Spouses of some plaintiffs claim loss of consortium.

Beryllium Claims

As of September 29, 2023, there were no pending beryllium cases. During the quarter ended September 29, 2023, one beryllium case was dismissed. In Richard Miller v. Dolphin, Inc. et al., case number CV2020-005163, filed in the Superior Court of Arizona, Maricopa County, the Company was one of six named defendants and 100 Doe defendants. The plaintiff alleged that he contracted beryllium disease from exposures to beryllium-containing products supplied to his employer, Karsten Manufacturing Corporation, where he was a production worker, and asserted claims for negligence, strict liability – failure to warn, strict liability – design defect, and fraudulent concealment. The plaintiff sought general damages, medical expenses, loss of earnings, consequential damages, and punitive damages, and his wife claimed loss of consortium. A co-defendant, Dolphin, Inc., filed a cross-claim against the Company for indemnification. On August 12, 2020, the Company moved to dismiss the cross-claim for failure to state a claim upon which relief can be granted. The court denied the motion on October 23, 2020. On December 7, 2020, the Company filed a Petition for Special Action in the Court of Appeals seeking to appeal the denial of the motion to dismiss the cross-claim. The Court of Appeals declined to accept jurisdiction on December 30, 2020. On March 30, 2023, the court dismissed all claims against four of the Company's codefendants, as well as the cross-claim by those codefendants against the Company, pursuant to a confidential settlement agreement between those codefendants and the plaintiffs. Following a court-ordered mediation on June 20, 2023, the Company and the other remaining defendant entered into a confidential settlement agreement with plaintiffs, pursuant to which all remaining claims in the case were to be dismissed with prejudice. On August 2, 2023, an order granting stipulation for dismissal with prejudice was filed by the court.

No beryllium cases were filed in the third quarter of 2023.

The Company has insurance coverage, which may respond, subject to an annual deductible.

Other Claims

On October 14, 2020, Garett Lucyk, et al. v. Materion Brush Inc., et. al., case number 20CV0234, a wage and hour purported collective and class action, was filed in the Northern District of Ohio against the Company and its subsidiary, Materion Brush Inc. (collectively, the Company). Plaintiff, a former hourly production employee at the Company's Elmore, Ohio facility, alleges, among other things, that he and other similarly situated employees nationwide are not paid for all time they spend donning and doffing personal protective equipment in violation of the Fair Labor Standards Act and Ohio law. Plaintiff filed a motion for conditional certification, which the Company opposed. On August 2, 2022, the Court conditionally certified a class of employees at the Company's Elmore facility only and rejected certification of a class across the Company's other facilities. In November 2022, the parties reached a settlement for an immaterial amount. The Court preliminarily approved the settlement on March 30, 2023 and a final approval hearing was held on July 6, 2023. There were no objections to the settlement and the Court entered an order approving the final settlement on July 7, 2023, and the settlement amount was subsequently paid out prior to the end of the third quarter.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds and Issuer Purchases of Equity Securities

The following table presents information with respect to repurchases of common stock made by the Company during the three months ended September 29, 2023.

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share (1)	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs (2)
July 1 through August 4, 2023	905	$ 120.67	—	$ 8,316,239
August 5 through September 1, 2023	791	107.02	—	8,316,239
September 2 through September 29, 2023	342	101.98	—	8,316,239
Total	2,038	$ 112.23	—	$ 8,316,239

(1) Represents shares surrendered to the Company by employees to satisfy tax withholding obligations on equity awards issued under the Company's stock incentive plan.

(2) On January 14, 2014, the Company announced that its Board of Directors had authorized the repurchase of up to $50.0 million of its common stock. During the three months ended September 29, 2023, the Company did not repurchase any shares under this program. As of September 29, 2023, $8.3 million may still be purchased under the program.

Item 4. Mine Safety Disclosures

Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K (17 CFR 229.104) is included in Exhibit 95 to this quarterly report on Form 10-Q.

Item 5. Other Information

During the quarter ended September 29, 2023, no director or officer (as defined in Rule 16a-1(f) under the Exchange Act) of the Company adopted or terminated a “Rule 10b5-1 trading arrangement” or “non-Rule 10b5-1 trading arrangement” (as each term is defined in Item 408 of Regulation S-K).

Item 6. Exhibits

All documents referenced below were filed pursuant to the Exchange Act by Materion Corporation, file number 001-15885, unless otherwise noted.

31.1	Certification of Chief Executive Officer required by Rule 13a-14(a) or 15d-14(a)*
31.2	Certification of Chief Financial Officer required by Rule 13a-14(a) or 15d-14(a)*
32	Certifications of Chief Executive Officer and Chief Financial Officer required by 18 U.S.C. Section 1350*
95	Mine Safety Disclosure Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the period ended September 29, 2023*
101.INS	XBRL Instance Document - the instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document*
101.SCH	Inline XBRL Taxonomy Extension Schema Document*
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document*
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document*
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document*
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in the Exhibit 101 attachments)

*Submitted electronically herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

MATERION CORPORATION

Dated: November 1, 2023

/s/ Shelly M. Chadwick

Shelly M. Chadwick
Vice President, Finance and Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 31.1

CERTIFICATIONS

I, Jugal K. Vijayvargiya, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Materion Corporation (the “registrant”);

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

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

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

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

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

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

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

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

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

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

/s/ Jugal K. Vijayvargiya

Dated: November 1, 2023

Jugal K. Vijayvargiya
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Shelly M. Chadwick, certify that:

1) I have reviewed this quarterly report on Form 10-Q of Materion Corporation (the “registrant”);

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

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

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

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

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

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

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

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

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

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

/s/ Shelly M. Chadwick

Dated: November 1, 2023

Shelly M. Chadwick
Vice President, Finance and Chief Financial Officer

Exhibit 32

Certification Pursuant to
18 U.S.C. Section 1350,
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

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 filing of the Quarterly Report on Form 10-Q of Materion Corporation (the "Company") for the quarter ended September 29, 2023 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies that, to such officer's knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)), and

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

Dated: November 1, 2023

/s/ Jugal K. Vijayvargiya
Jugal K. Vijayvargiya
President and Chief Executive Officer

/s/ Shelly M. Chadwick
Shelly M. Chadwick
Vice President, Finance and Chief Financial Officer

Exhibit 95

Materion Corporation

Mine Safety Disclosure Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the Fiscal Quarter Ended September 29, 2023

Materion Natural Resources Inc., a wholly owned subsidiary, operates a beryllium mining complex in the State of Utah which is regulated by both the U.S. Mine Safety and Health Administration ("MSHA") and state regulatory agencies. We endeavor to conduct our mining and other operations in compliance with all applicable federal, state and local laws and regulations. We present information below regarding certain mining safety and health citations which MSHA has levied with respect to our mining operations.

Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Section 1503(a)") requires the Company to present certain information regarding mining safety in its periodic reports filed with the Securities and Exchange Commission.

The following table reflects citations, orders and notices issued to Materion Natural Resources Inc. by MSHA during the fiscal quarter ended September 29, 2023 (the "Reporting Period") and contains certain additional information as required by Section 1503(a) and Item 104 of Regulation S-K, including information regarding mining-related fatalities, proposed assessments from MSHA and legal actions ("Legal Actions") before the Federal Mine Safety and Health Review Commission, an independent adjudicative agency that provides administrative trial and appellate review of legal disputes arising under the Mine Act.

Included below is the information required by Section 1503(a) with respect to the beryllium mining complex (MSHA Identification Number 4200706) for the Reporting Period:

(A)	Total number of alleged violations of mandatory health or safety standards that could significantly and substantially contribute to the cause and effect of a mine safety or health hazard under Section 104 of the Mine Act for which Materion Natural Resources Inc. received a citation from MSHA	0
(B)	Total number of orders issued under Section 104(b) of the Mine Act	0
(C)	Total number of citations and orders for alleged unwarrantable failure by Materion Natural Resources Inc. to comply with mandatory health or safety standards under Section 104(d) of the Mine Act	0
(D)	Total number of alleged flagrant violations under Section 110(b)(2) of the Mine Act	0
(E)	Total number of imminent danger orders issued under Section 107(a) of the Mine Act	0
(F)	Total dollar value of proposed assessments from MSHA under the Mine Act	$0
(G)	Total number of mining-related fatalities	0
(H)	Received notice from MSHA of a pattern of violations under Section 104(e) of the Mine Act	No
(I)	Received notice from MSHA of the potential to have a pattern of violations under Section 104(e) of the Mine Act	No
(J)	Total number of Legal Actions pending as of the last day of the Reporting Period	0
(K)	Total number of Legal Actions instituted during the Reporting Period	0
(L)	Total number of Legal Actions resolved during the Reporting Period	0