

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

FORM 10-Q

(Mark One)

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

For the quarterly period ended March 30, 2018

☐ 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

(State or other jurisdiction of incorporation or organization)

34-1919973

(I.R.S. Employer Identification No.)

6070 Parkland Blvd., Mayfield Heights, Ohio

(Address of principal executive offices)

44124

(Zip Code)

Registrant's telephone number, including area code:

216-486-4200

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 ☐ (Do not check if a smaller reporting company)

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 March 30, 2018: 20,190,554 .

PART I FINANCIAL INFORMATION

MATERION CORPORATION AND SUBSIDIARIES

Item 1. Financial Statements

The consolidated financial statements of Materion Corporation and its subsidiaries for the first quarter ended March 30, 2018 are as follows:

[Consolidated Statements of Income -](#) [2](#)

First quarter ended March 30, 2018 and March 31, 2017

[Consolidated Statements of Comprehensive Income -](#) [3](#)

First quarter ended March 30, 2018 and March 31, 2017

[Consolidated Balance Sheets -](#) [4](#)

March 30, 2018 and December 31, 2017

[Consolidated Statements of Cash Flows -](#) [5](#)

Three months ended March 30, 2018 and March 31, 2017

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Materion Corporation and Subsidiaries
Consolidated Statements of Income
(Unaudited)

	First Quarter Ended	
	March 30, 2018	March 31, 2017
(Thousands, except per share amounts)		
Net sales	\$ 303,467	\$ 240,669
Cost of sales	245,187	197,513
Gross margin	58,280	43,156
Selling, general, and administrative expense	38,462	33,521
Research and development expense	3,643	3,130
Other—net	2,924	2,818
Operating profit	13,251	3,687
Interest expense—net	730	493
Other non-operating expense—net	442	267
Income before income taxes	12,079	2,927
Income tax expense (benefit)	1,515	(123)
Net income	\$ 10,564	\$ 3,050
Basic earnings per share:		
Net income per share of common stock	\$ 0.52	\$ 0.15
Diluted earnings per share:		
Net income per share of common stock	\$ 0.51	\$ 0.15
Cash dividends per share	\$ 0.100	\$ 0.095
Weighted-average number of shares of common stock outstanding:		
Basic	20,135	19,969
Diluted	20,574	20,375

The accompanying notes are an integral part of the consolidated financial statements.

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

(Thousands)	First Quarter Ended	
	March 30, 2018	March 31, 2017
Net income	\$ 10,564	\$ 3,050
Other comprehensive income (loss):		
Foreign currency translation adjustment	1,113	1,103
Derivative and hedging activity, net of tax	(675)	(461)
Pension and post-employment benefit adjustment, net of tax	1,278	757
Other comprehensive income	1,716	1,399
Comprehensive income	\$ 12,280	\$ 4,449

The accompanying notes are an integral part of the consolidated financial statements.

Materion Corporation and Subsidiaries
Consolidated Balance Sheets

(Thousands)	(Unaudited)	
	March 30, 2018	Dec. 31, 2017
Assets		
Current assets		
Cash and cash equivalents	\$ 20,206	\$ 41,844
Accounts receivable	134,174	124,014
Inventories	216,443	220,352
Prepaid and other current assets	25,584	24,733
Total current assets	396,407	410,943
Long-term deferred income taxes	17,616	17,047
Property, plant, and equipment	886,653	891,789
Less allowances for depreciation, depletion, and amortization	(629,953)	(636,211)
Property, plant, and equipment—net	256,700	255,578
Intangible assets—net	8,857	9,847
Other assets	7,376	6,992
Goodwill	90,922	90,677
Total Assets	\$ 777,878	\$ 791,084
Liabilities and Shareholders' Equity		
Current liabilities		
Short-term debt	\$ 787	\$ 777
Accounts payable	53,496	49,059
Salaries and wages	23,959	42,694
Other liabilities and accrued items	27,423	28,044
Income taxes	2,680	1,084
Unearned revenue	5,417	5,451
Total current liabilities	113,762	127,109
Other long-term liabilities	30,579	30,967
Retirement and post-employment benefits	85,660	93,225
Unearned income	35,820	36,905
Long-term income taxes	4,867	4,857
Long-term deferred income taxes	218	213
Long-term debt	2,643	2,827
Shareholders' equity		
Serial preferred stock	—	—
Common stock	227,694	223,484
Retained earnings	545,093	536,116
Common stock in treasury	(171,574)	(166,128)
Accumulated other comprehensive loss	(101,221)	(102,937)
Other equity transactions	4,337	4,446
Total shareholders' equity	504,329	494,981
Total Liabilities and Shareholders' Equity	\$ 777,878	\$ 791,084

The accompanying notes are an integral part of the consolidated financial statements.

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

(Thousands)	Three Months Ended	
	March 30, 2018	March 31, 2017
Cash flows from operating activities:		
Net income	\$ 10,564	\$ 3,050
Adjustments to reconcile net income to net cash provided from (used in) operating activities:		
Depreciation, depletion, and amortization	9,207	10,090
Amortization of deferred financing costs in interest expense	261	230
Stock-based compensation expense (non-cash)	771	2,338
Deferred income tax (benefit) expense	(359)	(696)
Changes in assets and liabilities net of acquired assets and liabilities:		
Decrease (increase) in accounts receivable	(8,582)	(13,644)
Decrease (increase) in inventory	5,097	(9,593)
Decrease (increase) in prepaid and other current assets	(634)	(1,435)
Increase (decrease) in accounts payable and accrued expenses	(16,308)	(835)
Increase (decrease) in interest and taxes payable	1,626	(1,237)
Domestic pension plan contributions	(9,000)	(4,000)
Other-net	(818)	(1,097)
Net cash used in operating activities	(8,175)	(16,829)
Cash flows from investing activities:		
Payments for purchase of property, plant, and equipment	(7,867)	(6,128)
Payments for mine development	(1,661)	(200)
Payments for acquisition	—	(16,406)
Proceeds from sale of property, plant, and equipment	3	16
Net cash used in investing activities	(9,525)	(22,718)
Cash flows from financing activities:		
Proceeds from issuance of short-term debt	—	6,186
Proceeds from issuance of long-term debt	—	27,000
Repayment of long-term debt	(190)	(5,180)
Principal payments under capital lease obligations	(211)	(190)
Cash dividends paid	(2,012)	(1,895)
Deferred financing costs	—	(300)
Repurchase of common stock	—	(405)
Payments of withholding taxes for stock-based compensation awards	(2,133)	(1,480)
Net cash (used in) provided by financing activities	(4,546)	23,736
Effects of exchange rate changes	608	688
Net change in cash and cash equivalents	(21,638)	(15,123)
Cash and cash equivalents at beginning of period	41,844	31,464
Cash and cash equivalents at end of period	\$ 20,206	\$ 16,341

The accompanying notes are an integral part of the consolidated financial statements.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

Note A — Accounting Policies

Basis of Presentation: In management's opinion, 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. Certain amounts in prior periods have been reclassified to conform to the 2018 consolidated financial statement presentation.

These financial statements should be read in conjunction with the consolidated financial statements and related notes included in the Company's 2017 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 2017, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*, which requires an employer to report the service cost component of net benefit cost in the same line item as other compensation costs arising from services rendered by pertinent employees during the period. This ASU requires non-service cost components of net benefit cost to be presented in a caption below the Company's Operating profit and allows only the service cost component to be eligible for capitalization. This ASU is effective for fiscal years beginning after December 15, 2017, including interim periods within those periods, with early adoption permitted. The amendments were applied retrospectively for the presentation of service cost and other components of net benefit cost on the income statement and prospectively for the capitalization of service cost and net periodic postretirement benefits in assets. At March 31, 2017, the application of ASU 2017-07 resulted in an increase to Operating profit of \$0.3 million, which was offset by a corresponding increase in Other non-operating expense, net. The adoption of this ASU did not have a material effect on the Company's financial condition or liquidity. The Company utilized this ASU's practical expedient, which permits the Company to use the amounts disclosed in its Pensions and Other Post-employment Benefits note for the prior comparative periods as the estimation basis for applying the retrospective presentation requirements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* (ASC 606), which supersedes previous revenue recognition guidance. The Company adopted the new standard using the modified retrospective method as of January 1, 2018. Prior periods were not retrospectively adjusted. This approach was applied to all contracts not completed as of January 1, 2018. The new standard primarily impacted the Company's timing of revenue recognition for certain contracts and subcontracts with the United States (U.S.) government that contain termination for convenience clauses, and due to the cumulative impact of adopting ASC 606, the Company recorded a reduction to beginning retained earnings of \$0.4 million, net of tax as summarized below:

(Thousands)	December 31, 2017	Adjustments due to ASC 606	January 1, 2018
Assets			
Unbilled receivables	\$ —	\$ 2,658	\$ 2,658
Inventories	220,352	(2,059)	218,293
Liabilities and Shareholders' Equity			
Other liabilities and accrued items	\$ 28,044	61	28,105
Deferred income taxes	213	113	326
Retained earnings	536,116	425	536,541

The adoption of the standard did not have a material impact to the Company's consolidated financial statements at March 30, 2018. Refer to Note B for additional disclosures relating to ASC 606.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

New Pronouncements Issued: In August 2017, the FASB issued ASU 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities*, which amends and simplifies existing guidance to allow companies to more accurately present the economic effects of risk management activities in the financial statements. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods within those periods, with early adoption permitted. The Company is currently evaluating the impact of adopting this new guidance on its consolidated financial statements.

In February 2016, the FASB issued ASU 2016-02, *Leases*, which eliminates the off-balance-sheet accounting for leases. The new guidance will require lessees to report their operating leases as both an asset and liability on the balance sheet and disclose key information about leasing arrangements. The Company will adopt this ASU on January 1, 2019. In preparation for the adoption, the Company, along with an outside consultant, has executed on its project plan to identify a complete lease population, analyze lease agreements, and evaluate technology solutions. Currently, this ASU is required to be applied on a modified retrospective basis. The FASB has proposed another transition method in addition to the existing requirements to transition to the new lease standard by recognizing a cumulative effect adjustment to the opening balance of retained earnings in the period of adoption. The Company has not decided on its transition method to adopt this new guidance.

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 — 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 the 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.

Shipping and Handling Costs : The Company accounts for shipping and handling activities related to contracts with customers as costs to fulfill our promise to transfer the associated products. Accordingly, customer payments of shipping and handling costs are recorded as a component of net sales, and related costs are recorded as a component of cost of sales.

Taxes Collected from Customers and Remitted to Governmental Authorities : Revenue is recorded net of taxes collected from customers that are remitted to governmental authorities, with the collected taxes recorded as current liabilities until remitted to the relevant government authority.

Product Warranty : Substantially all of the Company's customer contracts contain a warranty that provides assurance that the purchased product will function as expected and in accordance with certain specifications. The warranty is intended to safeguard the customer against existing defects and does not provide any incremental service to the customer.

Transaction Price Allocated to Future Performance Obligations: ASC 606 requires that the Company disclose the aggregate amount of transaction price that is allocated to performance obligations that have not yet been satisfied at March 30, 2018. Remaining performance obligations include noncancelable 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 March 30, 2018, the aggregate amount of the transaction price allocated to remaining performance obligations was approximately \$40.0 million, of which \$11.0 million will be recognized in 2018.

Contract Costs : The Company recognizes the incremental costs of obtaining contracts as an expense when incurred if the amortization period of the assets that the Company otherwise would have recognized is one year or less. These costs primarily relate to sales commissions which are included in selling, general, and administrative expenses.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

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

(Thousands)	March 30, 2018	January 1, 2018	\$ change	% change
Accounts receivable, trade	\$ 130,367	\$ 122,393	\$ 7,974	7 %
Unbilled receivables	2,981	2,658	323	12 %
Unearned revenue	5,417	5,451	(34)	(1)%

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 relating to our receivables were immaterial during the first quarter of 2018.

Unbilled receivables represent expenditures on contracts, plus applicable profit margin, not yet billed. Unbilled receivables are normally 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 the shipment of the goods.

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 C — Acquisitions

On February 28, 2017, the Company acquired the target materials business of the Heraeus Group (HTB), of Hanau, Germany, for \$16.5 million . This business manufactures precious and non-precious metal target materials for the architectural and automotive glass, electronic display, photovoltaic, and semiconductor markets at facilities in Germany, Taiwan, and the United States. This business operates within the Advanced Materials segment, and the results of operations are included as of the date of acquisition.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

The final purchase price allocation for the acquisition is as follows:

(Thousands)	Amount
Assets:	
Inventories	\$ 7,221
Prepaid and other current assets	2,270
Long-term deferred income taxes	14
Property, plant, and equipment	6,501
Intangible assets	3,649
Goodwill	3,574
Total assets acquired	\$ 23,229
Liabilities:	
Other liabilities and accrued items	\$ 984
Other long-term liabilities	449
Retirement and post-employment benefits	5,292
Total liabilities assumed	\$ 6,725
Total purchase price	<u>\$ 16,504</u>

Note D — Segment Reporting

The Company has the following operating segments: Performance Alloys and Composites, Advanced Materials, Precision Coatings, and Other. The Company's operating 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 Alloys and Composites produces strip and bulk form alloy products, strip metal products with clad inlay and overlay metals, beryllium-based metals, beryllium, and aluminum metal matrix composites, in rod, sheet, foil, and a variety of customized forms, beryllia ceramics, and bulk metallic glass materials.

Advanced 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 Coatings 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.

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Coatings	Other	Total
First Quarter 2018					
Net sales	\$ 118,236	\$ 153,545	\$ 31,686	\$ —	\$ 303,467
Intersegment sales	28	11,652	—	—	11,680
Value-added sales	100,299	58,283	23,641	(910)	181,313
Operating profit (loss)	9,861	5,898	3,375	(5,883)	13,251
First Quarter 2017					
Net sales	\$ 92,553	\$ 114,736	\$ 33,380	\$ —	\$ 240,669
Intersegment sales	55	16,447	—	—	16,502
Value-added sales	79,211	47,288	23,301	(819)	148,981
Operating profit (loss)	189	6,447	2,218	(5,167)	3,687

The following table disaggregates revenue for each segment by end market for the first quarter of 2018:

(Thousands)	Performance Alloys and Composites	Advanced Materials	Precision Coatings	Other	Total
End Market					
Consumer Electronics	\$ 25,358	\$ 82,050	\$ 4,279	\$ —	\$ 111,687
Industrial Components	28,521	13,299	2,492	—	44,312
Energy	7,804	23,436	—	—	31,240
Automotive Electronics	18,970	—	222	—	19,192
Defense	6,622	4,485	4,315	—	15,422
Medical	1,743	4,409	19,070	—	25,222
Telecom Infrastructure	8,094	7,357	59	—	15,510
Other	21,124	18,509	1,249	—	40,882
Total	\$ 118,236	\$ 153,545	\$ 31,686	\$ —	\$ 303,467

Intersegment sales are eliminated in consolidation.

Note E — Other-net

Other-net expense for the first quarter of 2018 and 2017 is summarized as follows:

(Thousands)	First Quarter Ended	
	March 30, 2018	March 31, 2017
Metal consignment fees	\$ 2,429	\$ 1,685
Amortization of intangible assets	773	1,045
Foreign currency exchange/translation (gain)	(11)	(257)
Net loss on disposal of fixed assets	26	28
Other items	(293)	317
Total	\$ 2,924	\$ 2,818

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

Note F — Income Taxes

On December 22, 2017, the Tax Cuts and Jobs Act (TCJA) was signed into law. The TCJA includes a number of provisions, including: (1) the lowering of the U.S. corporate tax rate from 35% to 21% ; (2) elimination of the corporate alternative minimum tax (AMT); (3) the creation of the base erosion anti-abuse tax (BEAT, a new minimum tax); (4) a general elimination of the U.S. federal income taxes on dividends from foreign subsidiaries; (5) a new provision designed to tax global intangible low-taxed income (GILTI), which allows for the possibility of using foreign tax credits (FTCs) and a deduction of up to 50 percent to offset the income tax liability (subject to some limitations); (6) a new limitation on deductible interest expense; (7) the repeal of the domestic production activity deduction; and (8) limitations on the deductibility of certain executive compensation.

The Company recorded income tax expense of \$1.5 million in the first quarter of 2018, an effective tax rate of 12.5% against income before income taxes, and income tax benefit of \$0.1 million in the first quarter of 2017, an effective tax rate of (4.2)% against income before income taxes. Income tax expense in the first quarter of 2018 differed from the U.S. Federal statutory income tax rate of 21% primarily due to the impact of percentage depletion, foreign rate differential, U.S. research and development credit, the new GILTI income inclusion, the new executive compensation limitations and a discrete tax adjustment of \$0.9 million . The TCJA provisional adjustment to remeasurement of certain deferred tax assets and liabilities was \$0.6 million of this discrete item. The Company does not expect to incur a new BEAT minimum tax or an interest expense limitation. In the first quarter of 2017, the income expense differed from the U.S Federal statutory income tax rate of 35% primarily due to the impact of percentage depletion, foreign rate differential, U.S. research and development credit, and a discrete tax benefit of \$0.7 million related to officer compensation and the adoption of ASU 2016-09, *Improvements to Employee Share-based Payment Accounting* .

As disclosed in Note G ("Income Taxes") in the Company's 2017 Annual Report on Form 10-K, the Company was able to reasonably estimate certain TCJA effects and, therefore, recorded provisional adjustments associated with the deemed repatriation transition tax and remeasurement of certain deferred tax asset and liabilities. As of the first quarter of 2018, the Company's accounting for the TCJA is incomplete and the previously disclosed provisional amounts (transition tax and remeasurement of deferred taxes) continue to be provisional.

The Company has not made any additional measurement-period adjustments related to the transition tax during 2018 because the calculation of the total post-1986 earnings and profits (E&P) for these foreign subsidiaries has not yet been completed. Further, the transition tax is based in part on the amount of those earnings held in cash and other specified assets. This amount may change when the Company finalizes the calculation of post-1986 foreign E&P previously deferred from U.S. federal taxation and finalize the amounts held in cash or other specified assets. The Company is continuing to gather additional information to complete its accounting for these items and expects to complete its accounting within the prescribed measurement period. No additional income taxes have been provided for any remaining undistributed foreign earnings not subject to the transition tax, or any additional outside basis difference inherent in these entities, as these amounts continue to be indefinitely reinvested in foreign operations.

The Company was able to reasonably estimate the remeasurement of certain deferred tax asset and liabilities at an initial provisional amount to be \$5.0 million of additional income tax expense for the year ending December 31, 2017. The total adjustment to tax expense related to the remeasurement of certain deferred tax asset and liabilities that has been recorded to date is \$4.4 million . However, the Company is continuing to gather additional information to more precisely compute the amount of the tax expense related to remeasurement. The accounting for this item is not yet complete because judgment is required with respect to the timing and deductibility of certain expenses in the Company's income tax return.

Due to the complexity of the new GILTI tax rules, the Company is continuing to evaluate this provision of the TCJA and the application of the Accounting Standards Codification 740, *Income Taxes* . Under U.S. GAAP, the Company is allowed to make an accounting policy choice of either (1) treating taxes due on future U.S. inclusions in taxable income related to GILTI as a current-period expense when incurred (the "period cost method") or (2) factoring such amounts into the Company's measurement of its deferred taxes (the "deferred method"). The Company's selection of an accounting policy related to the new GILTI tax rules will depend on a number of different aspects of the estimated long-term effects of this provision under the TCJA. Therefore, the Company has not recorded any potential deferred tax effects related to the GILTI in the financial statements and has not made a policy decision regarding whether to record deferred taxes on GILTI or use the period cost method. However, the Company has included an estimate of the 2018 current GILTI impact in the annual effective tax rate for 2018.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

Note G — Earnings Per Share (EPS)

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

	First Quarter Ended	
	March 30, 2018	March 31, 2017
(Thousands, except per share amounts)		
Numerator for basic and diluted EPS:		
Net income	\$ 10,564	\$ 3,050
Denominator:		
Denominator for basic EPS:		
Weighted-average shares outstanding	20,135	19,969
Effect of dilutive securities:		
Stock appreciation rights	203	187
Restricted stock units	98	121
Performance-based restricted stock units	138	98
Diluted potential common shares	439	406
Denominator for diluted EPS:		
Adjusted weighted-average shares outstanding	20,574	20,375
Basic EPS	\$ 0.52	\$ 0.15
Diluted EPS	\$ 0.51	\$ 0.15

Securities totaling 65,112 and 383,584 for the quarters ended March 30, 2018 and March 31, 2017 , respectively, were excluded from the dilution calculation as their effect would have been anti-dilutive.

Note H — Inventories

Inventories on the Consolidated Balance Sheets are summarized as follows:

	March 30, 2018	December 31, 2017
(Thousands)		
Raw materials and supplies	\$ 43,004	\$ 42,958
Work in process	185,161	187,719
Finished goods	34,543	34,418
Subtotal	\$ 262,708	\$ 265,095
Less: LIFO reserve balance	46,265	44,743
Inventories	\$ 216,443	\$ 220,352

The liquidation of last in, first out (LIFO) inventory layers had no impact to cost of sales in the first quarter of 2018 or 2017.

Note I — Pensions and Other Post-employment Benefits

The following is a summary of the net periodic benefit cost for the first quarter of 2018 and 2017 for the domestic pension plans (which include the defined benefit pension plan and the supplemental retirement plans) and the domestic retiree medical plan.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

(Thousands)	Pension Benefits		Other Benefits	
	First Quarter Ended		First Quarter Ended	
	March 30, 2018	March 31, 2017	March 30, 2018	March 31, 2017
Components of net periodic benefit cost (benefit)				
Service cost	\$ 1,674	\$ 1,719	\$ 28	\$ 23
Interest cost	2,397	2,356	99	99
Expected return on plan assets	(3,697)	(3,365)	—	—
Amortization of prior service benefit	(31)	(121)	(374)	(374)
Amortization of net loss	1,960	1,587	—	—
Net periodic benefit cost (benefit)	<u>\$ 2,303</u>	<u>\$ 2,176</u>	<u>\$ (247)</u>	<u>\$ (252)</u>

The Company made contributions to the domestic defined benefit pension plan of \$9.0 million and \$4.0 million in the first quarter of 2018 and 2017 , respectively. Beginning in 2018, 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 expenses. Additionally, Pension Benefit Guaranty Corporation premiums are reported within expected return on plan assets.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

Note J — Accumulated Other Comprehensive Income (Loss)

Changes in the components of accumulated other comprehensive income, including the amounts reclassified, for the first quarter of 2018 and 2017 are as follows:

(Thousands)	Gains and Losses on Cash Flow Hedges			Pension and Post-Employment Benefits	Foreign Currency Translation	Total
	Foreign Currency	Precious Metals	Total			
Balance at December 31, 2017	\$ 959	\$ (196)	\$ 763	\$ (99,592)	\$ (4,108)	\$ (102,937)
Other comprehensive income (loss) before reclassifications	(1,198)	(191)	(1,389)	—	1,113	(276)
Amounts reclassified from accumulated other comprehensive income	377	136	513	1,626	—	2,139
Net current period other comprehensive income (loss) before tax	(821)	(55)	(876)	1,626	1,113	1,863
Deferred taxes on current period activity	(188)	(13)	(201)	348	—	147
Net current period other comprehensive income (loss) after tax	(633)	(42)	(675)	1,278	1,113	1,716
Balance at March 30, 2018	\$ 326	\$ (238)	\$ 88	\$ (98,314)	\$ (2,995)	\$ (101,221)
Balance at December 31, 2016	\$ 1,837	\$ —	\$ 1,837	\$ (82,358)	\$ (5,660)	\$ (86,181)
Other comprehensive income (loss) before reclassifications	(252)	(158)	(410)	—	1,103	693
Amounts reclassified from accumulated other comprehensive income	(261)	—	(261)	1,153	—	892
Net current period other comprehensive income (loss) before tax	(513)	(158)	(671)	1,153	1,103	1,585
Deferred taxes on current period activity	(152)	(58)	(210)	396	—	186
Net current period other comprehensive income (loss) after tax	(361)	(100)	(461)	757	1,103	1,399
Balance at March 31, 2017	\$ 1,476	\$ (100)	\$ 1,376	\$ (81,601)	\$ (4,557)	\$ (84,782)

Reclassifications from accumulated other comprehensive income of gains and losses on foreign currency cash flow hedges are recorded in Other-net in the Consolidated Statements of Income. Reclassifications from accumulated other comprehensive income of gains and losses on precious metal cash flow hedges are recorded in Cost of sales in the Consolidated Statements of Income. Refer to Note M for additional details on cash flow hedges.

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

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

Note K — Stock-based Compensation Expense

Stock-based compensation expense, which includes awards settled in shares and in cash, was \$2.5 million and \$2.3 million in the first quarter of 2018 and 2017, respectively.

The Company granted 65,112 stock appreciation rights to certain employees during the first quarter of 2018 . The weighted-average exercise price per share and weighted-average fair value per share of the SARs granted during the three months ended March 30, 2018 were \$50.35 and \$15.73 , 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	2.58%
Dividend yield	0.8%
Volatility	31.9%
Expected term (in years)	5.5

The Company granted 59,222 stock-settled restricted stock units (RSUs) to certain employees during the first three months of 2018 . 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 \$50.35 for stock-settled RSUs granted during the three months ended March 30, 2018 . RSUs are expensed over the vesting period of three years .

The Company granted stock-settled performance-based restricted stock units (PRSUs) to certain employees in the first quarter of 2018 . The weighted-average fair value of the stock-settled PRSUs was \$50.35 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 the total return to shareholders over the vesting period relative to a peer group's performance over the same period.

At March 30, 2018 , unearned compensation cost related to the unvested portion of all stock-based awards was approximately \$10.4 million , and is expected to be recognized over the remaining vesting period of the respective grants.

Note L — Fair Value of Financial Instruments

The Company measures and records financial instruments at fair value. A fair value 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.

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The following table summarizes the financial instruments measured at fair value in the Consolidated Balance Sheets as of March 30, 2018 and December 31, 2017 :

(Thousands)	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)	
	2018	2017	2018	2017	2018	2017	2018	2017
Financial Assets								
Deferred compensation investments	\$ 2,518	\$ 2,310	\$ 2,518	\$ 2,310	\$ —	\$ —	\$ —	\$ —
Foreign currency forward contracts	12	254	—	—	12	254	—	—
Precious metal swaps	13	14	—	—	13	14	—	—
Total	\$ 2,543	\$ 2,578	\$ 2,518	\$ 2,310	\$ 25	\$ 268	\$ —	\$ —
Financial Liabilities								
Deferred compensation liability	\$ 2,518	\$ 2,310	\$ 2,518	\$ 2,310	\$ —	\$ —	\$ —	\$ —
Foreign currency forward contracts	734	201	—	—	734	201	—	—
Precious metal swaps	324	269	—	—	324	269	—	—
Total	\$ 3,576	\$ 2,780	\$ 2,518	\$ 2,310	\$ 1,058	\$ 470	\$ —	\$ —

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 and metals. The carrying values of the other working capital items and debt in the Consolidated Balance Sheets approximate fair values as of March 30, 2018 and December 31, 2017.

Note M — Derivative Instruments and Hedging Activity

The Company uses derivative contracts to hedge portions of its foreign currency exposures and uses derivatives to hedge a portion of its precious metal exposures. The objectives and strategies for using derivatives in these areas are as follows:

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, 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 risk 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 instruments to use to hedge that exposure within the confines of the policy. 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. Hedge

Materion Corporation and Subsidiaries
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contracts are typically layered in at different times for a specified exposure period in order to minimize the impact of 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 precious metal product is fabricated and ready for shipment to the customer, the metal is purchased out of consignment at the current market price. The price paid by the Company forms the basis for the price charged to the customer. 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 financial institutions that charge the Company a financing fee based upon the current value of the metal on hand.

In certain instances, a customer may want to establish 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 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 purchased, thereby reducing the exposure to adverse movements in the price of the metal.

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.

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 typically held for a short duration. A forward contract will be secured at the time of the purchase to fix the price to be used when the metal is transferred back to the consignment line, thereby limiting any price exposure during the time when the metal was owned.

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

All derivatives are recorded on the balance sheet at fair value. If the 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) until the hedged item is recognized in 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 fair values will also be classified as short-term or long-term depending upon their maturity dates.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
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The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives not designated as hedging instruments and balance sheet classification as of March 30, 2018 and December 31, 2017 :

(Thousands)	March 30, 2018		December 31, 2017	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Foreign currency forward contracts - euro				
Prepaid expenses	\$ 3,800	\$ 12	\$ 13,981	\$ 127
Other liabilities and accrued items	20,103	(56)	—	—
Total	<u>\$ 23,903</u>	<u>\$ (44)</u>	<u>\$ 13,981</u>	<u>\$ 127</u>

These outstanding foreign currency derivatives were related to intercompany loans. Other-net included foreign currency losses relating to these derivatives of \$0.5 million and \$0.1 million during the first quarter of 2018 and 2017, respectively.

The following table summarizes the notional amount and the fair value of the Company's outstanding derivatives designated as cash flow hedges and balance sheet classification as of March 30, 2018 and December 31, 2017 :

(Thousands)	March 30, 2018		December 31, 2017	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Prepaid expenses				
Foreign currency forward contracts - yen	\$ —	\$ —	\$ 5,673	\$ 91
Foreign currency forward contracts - euro	—	—	5,026	36
Precious metal swaps	546	4	—	—
Total	<u>546</u>	<u>4</u>	<u>10,699</u>	<u>127</u>
Other assets				
Precious metal swaps	690	9	880	14
Total	<u>690</u>	<u>9</u>	<u>880</u>	<u>14</u>
Other liabilities and accrued items				
Foreign currency forward contracts - yen	3,920	(212)	—	—
Foreign currency forward contracts - euro	12,904	(466)	13,583	(201)
Precious metal swaps	9,042	(318)	10,067	(255)
Total	<u>25,866</u>	<u>(996)</u>	<u>23,650</u>	<u>(456)</u>
Other long-term liabilities				
Precious metal swaps	401	(6)	789	(14)
Total	<u>\$ 27,503</u>	<u>\$ (989)</u>	<u>\$ 36,018</u>	<u>\$ (329)</u>

All of these contracts were designated and effective as cash flow hedges. No ineffectiveness expense was recorded in the first quarter of 2018 or 2017.

Changes in the fair value of outstanding cash flow hedges recorded in OCI for the first three months of 2018 and 2017 totaled decreases of \$1.4 million and \$0.4 million, respectively. The Company expects to relieve substantially the entire balance in OCI as of March 30, 2018 to the Consolidated Statements of Income within the next 18-month period. Refer to Note J for additional OCI details.

Materion Corporation and Subsidiaries
Notes to Consolidated Financial Statements
(Unaudited)

Note N — Contingencies

Legal Proceedings . For information regarding legal proceedings relating to *Chronic Beryllium Disease Claims* , refer to Note R ("Contingencies and Commitments") in the Company's 2017 Annual Report on Form 10-K.

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.

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 \$6.4 million at March 30, 2018 and \$6.5 million at December 31, 2017 . Environmental projects tend to be long-term, and the final actual remediation costs may differ from the amounts currently recorded.

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 electrical, electronic, thermal, and structural applications. Our products are sold into numerous end markets, including consumer electronics, industrial components, defense, medical, automotive electronics, telecommunications infrastructure, energy, commercial aerospace, science, services, and appliance.

RESULTS OF OPERATIONS

First Quarter

(Thousands, except per share data)	First Quarter Ended			
	March 30, 2018	March 31, 2017	\$ Change	% Change
Net sales	\$ 303,467	\$ 240,669	\$ 62,798	26%
Value-added sales	181,313	148,981	32,332	22%
Gross margin	58,280	43,156	15,124	35%
Gross margin as a % of value-added sales	32%	29%	N/A	N/A
Selling, general, and administrative (SG&A) expense	38,462	33,521	4,941	15%
SG&A expense as a % of value-added sales	21%	23%	N/A	N/A
Research and development (R&D) expense	3,643	3,130	513	16%
R&D expense as a % of value-added sales	2%	2%	N/A	N/A
Other—net	2,924	2,818	106	4%
Operating profit	13,251	3,687	9,564	259%
Interest expense—net	730	493	237	48%
Other non-operating expense—net	442	267	175	66%
Income before income taxes	12,079	2,927	9,152	313%
Income tax expense (benefit)	1,515	(123)	1,638	N/A
Net income	\$ 10,564	\$ 3,050	\$ 7,514	246%
Diluted earnings per share	\$ 0.51	\$ 0.15	\$ 0.36	240%

N/A = Not Applicable

Net sales of \$303.5 million in the first quarter of 2018 were \$62.8 million higher than the \$240.7 million recorded in the first quarter of 2017. During the first quarter of 2018, \$31.6 million of incremental net sales were attributable to the high performance target materials business of the Heraeus Group (HTB). Changes in precious metal and copper prices favorably impacted net sales in the first quarter of 2018 by approximately \$9.0 million when compared to the first quarter of 2017.

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 metal prices. 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 \$181.3 million in the first quarter of 2018 increased \$32.3 million, or 22% compared to the first quarter of 2017. During the first quarter of 2018, the HTB acquisition contributed incremental value-added sales of \$12.2 million. The remaining increase was primarily driven by organic growth as the result of new product sales, improved product mix, and end market demand, particularly in the consumer electronics and industrial components end markets.

Gross margin in the first quarter of 2018 was \$58.3 million, or \$15.1 million higher than the \$43.2 million gross margin recorded during the first quarter of 2017. Gross margin expressed as a percentage of value-added sales increased to 32% in the first quarter of 2018 from 29% in the first quarter of 2017 primarily due to increased profitability from organic sales growth.

SG&A expense was \$38.5 million in the first quarter of 2018, or \$5.0 million higher than the \$33.5 million recorded in the first quarter of 2017. The increase is attributable to normal course of business expenses from the HTB acquisition of \$1.2 million and higher variable compensation expense related to improved financial performance.

R&D expense consists primarily of direct personnel costs for pre-production evaluation and testing of new products, prototypes, and applications. R&D expense was flat as a percentage of value-added sales at approximately 2% in the first quarter of both 2018 and 2017.

Other-net was \$2.9 million of expense in the first quarter of 2018, or a \$0.1 million increase from the first quarter of 2017. Refer to Note E to the Consolidated Financial Statements for details of the major components within Other-net.

Interest expense-net was \$0.7 million and \$0.5 million in the first quarter of 2018 and 2017, respectively. The increase is primarily due to a capital lease entered into in 2017 in connection with the HTB acquisition.

Other non-operating expense-net includes components of pension and post-retirement expense other than service costs. Refer to Note I to the Consolidated Financial Statements for details of the components of net periodic benefit costs.

Income tax expense (benefit) for the first quarter of 2018 was \$1.5 million, compared to an income tax benefit of \$0.1 million in the first quarter of 2017 . The effective tax rate for the first quarter of 2018 was 12.5% compared to an effective tax rate of (4.2%) in the prior-year period. The effects of percentage depletion, the foreign rate differential, the research and development credit, discrete benefits, and other items were the primary factors for the difference between the effective and statutory rates in the first quarter of 2018 and 2017 . Refer to Note F to the Consolidated Financial Statements for further details on income taxes.

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 first three months of 2018 and 2017 is as follows:

(Thousands)	First Quarter Ended	
	March 30, 2018	March 31, 2017
Net sales		
Performance Alloys and Composites	\$ 118,236	\$ 92,553
Advanced Materials	153,545	114,736
Precision Coatings	31,686	33,380
Other	—	—
Total	\$ 303,467	\$ 240,669
Less: pass-through metal costs		
Performance Alloys and Composites	\$ 17,937	\$ 13,342
Advanced Materials	95,262	67,448
Precision Coatings	8,045	10,079
Other	910	819
Total	\$ 122,154	\$ 91,688
Value-added sales		
Performance Alloys and Composites	\$ 100,299	\$ 79,211
Advanced Materials	58,283	47,288
Precision Coatings	23,641	23,301
Other	(910)	(819)
Total	\$ 181,313	\$ 148,981

The cost of gold, silver, platinum, palladium, and copper can be quite volatile. Our pricing policy is to directly pass the 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.

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 metal 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 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.

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 Alloys and Composites, Advanced Materials, Precision Coatings, and Other. The Other reportable segment includes unallocated corporate costs.

Performance Alloys and Composites

First Quarter

(Thousands)	First Quarter Ended			
	March 30, 2018	March 31, 2017	\$ Change	% Change
Net sales	\$ 118,236	\$ 92,553	\$ 25,683	28%
Value-added sales	100,299	79,211	21,088	27%
Operating profit	9,861	189	9,672	5,117%

Net sales from the Performance Alloys and Composites segment of \$118.2 million in the first quarter of 2018 were 28% higher than net sales of \$92.6 million in the first quarter of 2017 primarily due to higher sales volume related to the industrial components, consumer electronics, and commercial aerospace end markets. In addition, the impact of higher pass-through metal prices favorably impacted net sales by approximately \$2.3 million.

Value-added sales of \$100.3 million in the first quarter of 2018 were 27% higher than value-added sales of \$79.2 million in the first quarter of 2017. The increase in value-added sales was driven by performance improvements in commercial execution and stronger demand in the aforementioned end markets of industrial components, consumer electronics, and commercial aerospace, as well as a \$3.5 million increase in raw material beryllium hydroxide sales.

Performance Alloys and Composites generated operating profit of \$9.9 million in the first quarter of 2018 compared to \$0.2 million in the first quarter of 2017. The increase in operating profit was primarily due to higher sales volume, favorable product mix, and improved manufacturing performance.

Advanced Materials

First Quarter

(Thousands)	First Quarter Ended			
	March 30, 2018	March 31, 2017	\$ Change	% Change
Net sales	\$ 153,545	\$ 114,736	38,809	34 %
Value-added sales	58,283	47,288	10,995	23 %
Operating profit	5,898	6,447	(549)	(9)%

Net sales from the Advanced Materials segment of \$153.5 million in the first quarter of 2018 were 34% higher than net sales of \$114.7 million in the first quarter of 2017 due to higher sales volume. During the first quarter of 2018, the HTB acquisition contributed incremental net sales of \$31.6 million. Also, net sales increased due to the favorable impact of pass-through metal prices of \$6.7 million.

Value-added sales of \$58.3 million in the first quarter of 2018 were 23% higher than value-added sales of \$47.3 million in the first quarter of 2017. During the first quarter of 2018, the HTB acquisition contributed incremental value-added sales of \$12.2 million. Excluding the HTB acquisition, value-added sales decreased \$1.2 million, driven by softer demand in the consumer electronics end market.

The Advanced Materials segment generated operating profit of \$5.9 million in the first quarter of 2018 compared to \$6.4 million in the first quarter of 2017. Operating profit in the first quarter of 2018 was negatively impacted by unfavorable product mix, particularly within the consumer electronics end market.

Precision Coatings

First Quarter

(Thousands)	First Quarter Ended			
	March 30, 2018	March 31, 2017	\$ Change	% Change
Net sales	\$ 31,686	\$ 33,380	(1,694)	(5)%
Value-added sales	23,641	23,301	340	1 %
Operating profit	3,375	2,218	1,157	52 %

Net sales from the Precision Coatings segment of \$31.7 million in the first quarter of 2018 were 5% lower than net sales of \$33.4 million in the first quarter of 2017 primarily due to lower sales volume involving precious metals.

Value-added sales of \$23.6 million in the first quarter of 2018 were 1% higher than value-added sales of \$23.3 million in the first quarter of 2017. The consumer electronics and defense end markets increased \$1.8 million primarily due to success in new product sales. This increase was partially offset by a decrease of \$0.7 million in the medical end market due to lower volume in the blood glucose test strip segment of the medical end market.

The Precision Coatings segment generated operating profit of \$3.4 million in the first quarter of 2018, compared to an operating profit of \$2.2 million in the first quarter of 2017. The increase in operating profit was driven by a combination of cost reduction actions, improved manufacturing performance, and favorable product mix.

Other

First Quarter

(Thousands)	First Quarter Ended			
	March 30, 2018	March 31, 2017	\$ Change	% Change
Net sales	\$ —	\$ —	—	—%
Value-added sales	(910)	(819)	(91)	11%
Operating loss	(5,883)	(5,167)	(716)	14%

The Other reportable segment in total includes unallocated corporate costs.

Corporate costs of \$5.9 million in the first quarter of 2018 increased \$0.7 million as compared to \$5.2 million in the first quarter of 2017. Corporate costs were approximately 3% of total Company value-added sales in the first quarter of both 2018 and 2017.

FINANCIAL POSITION

Cash Flow

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

(Thousands)	Three Months Ended		
	March 30, 2018	March 31, 2017	\$ Change
Net cash used in operating activities	\$ (8,175)	\$ (16,829)	\$ 8,654
Net cash used in investing activities	(9,525)	(22,718)	13,193
Net cash (used in) provided by financing activities	(4,546)	23,736	(28,282)
Effects of exchange rate changes	608	688	(80)
Net change in cash and cash equivalents	\$ (21,638)	\$ (15,123)	\$ (6,515)

Net cash used in operating activities totaled \$8.2 million in the first three months of 2018 versus \$16.8 million in the comparable prior-year period. Higher net income of \$7.5 million and working capital efficiencies offset by higher pension contributions resulted in a decrease in cash used for operating activities in the first three months of 2018 compared to the prior-year period.

Working capital requirements used cash of \$19.8 million during the first three months of 2018 compared to a use of \$24.1 million in the first three months of 2017. Cash flows used for accounts receivable were \$5.1 million less than the prior-year period. Our three-month trailing days sales outstanding (DSO) was approximately 39 days at March 30, 2018 versus 37 days at December 31, 2017. Inventory levels decreased, primarily in our Performance Alloys and Composites segment, due to working capital

initiatives resulting in cash provided of \$5.0 million at March 30, 2018 versus cash used of \$9.6 million in the prior year-period. Cash flows from accounts payable and accrued expenses used cash of \$16.3 million compared \$0.8 million in the prior-year period primarily due to higher incentive compensation payments and the HTB acquisition.

Net cash used in investing activities was \$9.5 million in the first three months of 2018 compared to \$22.7 million in the prior-year period. The decrease is primarily due to the \$16.4 million payment for the HTB acquisition made in the first quarter of 2017, partially offset by higher payments for property, plant, and equipment and mine development of \$3.2 million.

Capital expenditures are made primarily for new product development, replacing and upgrading equipment, infrastructure investments, and implementing information technology initiatives. For the full year 2018, the Company expects payments for property, plant, and equipment to be approximately \$30.0 to \$35.0 million and mine development expenditures to be approximately \$5.0 to \$10.0 million.

Net cash used in financing activities totaled \$4.5 million in the first three months of 2018 versus \$23.7 million provided by financing activities in the comparable prior-year period primarily due to higher net borrowings in the first quarter of 2017 compared to 2018.

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 and share repurchase programs, environmental remediation projects, and strategic acquisitions. At March 30, 2018, cash and cash equivalents held by our foreign operations totaled \$12.2 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 March 30, 2018 and December 31, 2017 is as follows:

(Thousands)	March 30, 2018	December 31, 2017
Total outstanding debt	\$ 3,629	\$ 3,818
Cash	20,206	41,844
Net debt (cash)	(16,577)	(38,026)
Available borrowing capacity	\$ 272,897	\$ 254,777

Net debt (cash) is a non-GAAP financial measure reflecting the Company's current liquidity 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. Non-GAAP financial measures, such as net debt (cash), have inherent limitations and should not be considered in isolation, or as a substitute for GAAP financial measures.

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 and amortization, and other adjustments. The main cause for the increase in the available borrowing capacity at March 30, 2018 as compared to December 31, 2017 was due to increased earnings before interest, income taxes, depreciation and amortization on a trailing 12-month basis.

In 2015, we entered into an amendment to our \$375.0 million revolving credit agreement (Credit Agreement). The amendment extends the maturity date of the Credit Agreement from 2018 to 2020 and provides more favorable pricing under certain circumstances. In addition, the amendment provides the Company and its subsidiaries with additional capacity to enter into facilities for the consignment, borrowing, or leasing of precious metals and copper, and provides enhanced flexibility to finance acquisitions and other strategic initiatives. The Credit Agreement is secured by substantially all of the assets of the Company and its direct subsidiaries, with the exception of non-mining real property and certain other assets. The Credit Agreement allows

us to borrow money at a premium over LIBOR or the prime rate and at varying maturities. The premium resets quarterly according to the terms and conditions available under the Credit Agreement.

The Credit Agreement includes restrictive covenants including incurring restrictions on additional indebtedness, acquisitions, dividends, and stock repurchases. In addition, the 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 March 30, 2018 and December 31, 2017. Cash on hand does not affect the covenants or the borrowing capacity under our debt agreements.

Portions of our business utilize off-balance sheet consignment arrangements to finance metal requirements. Expansion of business volumes and/or higher metal prices can put pressure on the consignment line limitations from time to time. As a result, we have negotiated increases in the available capacity under existing lines, added additional lines, and extended the maturity dates of existing lines in recent years. The available and unused capacity under the metal financing lines totaled approximately \$165.8 million as of March 30, 2018. The availability is determined by Board approved levels and actual line 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. In the first three months of 2018, we did not repurchase any of our common shares. Since the approval of the repurchase plan, we have purchased 1,082,264 shares at a total cost of \$34.3 million.

In the first quarter of 2018, we paid cash dividends of \$2.0 million on our common stock. 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 CONTRACTUAL OBLIGATIONS

We maintain the majority of the precious metals and 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 \$376.7 million as of March 30, 2018, versus \$320.0 million as of December 31, 2017. We were in compliance with all of the covenants contained in the consignment agreements as of March 30, 2018 and December 31, 2017. For additional information on our contractual obligations, refer to our Form 10-K for the year ended December 31, 2017.

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 Form 10-K for the year ended December 31, 2017. Significant changes to our critical accounting estimates as a result of adopting Accounting Standards Update 2014-09, *Revenue from Contracts with Customers* (ASC 606), are discussed below.

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. We recognize revenue, in an amount that reflects the consideration to which the Company expects to be entitled, when we satisfy a performance obligation by transferring control of a product to the customer. The core principle of ASC 606 is supported by five steps which are outlined below with management's judgment in applying each.

1) Identify the contract with a customer

A contract with a customer exists when the Company enters into an enforceable contract with a customer that identifies each party's rights regarding the products to be transferred and the related payment terms related to these services, the contract has commercial substance, and the Company determines that collection of substantially all consideration for products that are transferred is probable based on the customer's intent and ability to pay.

Management exercises judgment in its assessment that it is probable that the Company will collect substantially all of the payment attributed to products or services that will be transferred to our customers. We regularly review the creditworthiness of our customers considering such factors as historical collection experience, a customer's current credit standing, the age of accounts receivable balances, and general economic conditions that may affect a customer's ability to pay. If after we have recognized revenue, collectability of an account receivable becomes doubtful, we establish appropriate allowances and reserves against accounts receivable with respect to the previously recognized revenue that remains uncollected. Allowances and reserves against accounts receivable are maintained for estimated probable losses and are sufficient enough to ensure that accounts receivable are stated at amounts that are considered collectible.

If management forms a judgment that a particular customer's financial condition has deteriorated but decides to deliver products or services to the customer, we will defer recognizing revenue relating to products sold to that customer until collectability is reasonably assured, which typically coincides with the collection of cash.

The Company recognizes revenue net of reserves for price adjustments, returns, and prompt payment discounts. Management generally estimates this amount using the expected value method. The Company has sufficient experience with our customers that provide predictive value that the reserves recorded are appropriate.

2) Identify the performance obligations in the contract

Performance obligations promised in a contract are identified based on the products that will be transferred to the customer that are both capable of being distinct, whereby the customer can benefit from the product either on its own or together with other resources that are readily available from third parties or from the Company, and are distinct in the context of the contract, whereby the transfer of the product is separately identifiable from other promises in the contract.

Certain of the Company's contracts with customers contain multiple performance obligations. As a result, management utilizes judgment to determine the appropriate accounting, including whether multiple promised products or services in a contract should be accounted for separately or as a group, how the consideration should be allocated among the performance obligations, and when to recognize revenue upon satisfaction of the performance obligations.

3) Determine the transaction price

The transaction price is determined based on the consideration to which the Company will be entitled in exchange for transferring services to the customer. The vast majority of our contracts contain fixed consideration terms. However, the Company also has contracts with customers that include variable consideration. Volume discounts and rebates are offered as an incentive to encourage additional purchases and customer loyalty. Volume discounts and rebates typically require a customer to purchase a specified quantity of products, after which the price of additional products decreases. These contracts include variable consideration because the total amount to be paid by the customer is not known at contract inception and is affected by the quantity of products ultimately purchased. As a result, management applies judgment to estimate the volume discounts based on experience with similar contracts, customers, and current sales forecasts. Also, the Company has contracts, primarily relating to its precious metal products, where the transaction price includes variable consideration at contract inception because it is calculated based on a commodity index at a specified date. Management exercises judgment to determine the minimum amount to be included in the transaction price. Variable consideration is included in the transaction price if, in the Company's judgment, it is probable that a significant future reversal of cumulative revenue under the contract will not occur.

4) Allocate the transaction price to performance obligations in the contract

If the contract contains a single performance obligation, the entire transaction price is allocated to the single performance obligation. Contracts that contain multiple performance obligations require an allocation of the transaction price to each performance obligation based on the relative standalone selling price. The Company typically determines standalone selling price based on the price at which the performance obligation is sold separately. If the standalone selling price is not observable through past transactions, management uses judgment to estimate the standalone selling price taking into account available information such as market conditions and internally approved pricing guidelines related to the performance obligations.

5) Recognize revenue when or as the Company satisfies a performance obligation

Management applies the principle of control to determine whether the customer obtains control of a product as it is created and if revenue should be recognized over time. The vast majority of the Company's performance obligations are satisfied at a point in time when control of the product transfers to the customer. Control of the 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 the customer has accepted the product.

However, for certain contracts, particularly relating to the U.S. government and relating to specialized products with no alternative use, we generally recognize revenue over time as we procure the product because of continuous transfer of control to the customer. This continuous transfer of control to the customer is supported by a termination for convenience clause in the contract that allows the customer to unilaterally terminate the contract, pay the Company for costs incurred plus a reasonable profit, and take control of any work in process. We generally use the cost-to-cost measure of progress for these contracts because it best depicts the transfer of control to the customer which occurs as we incur costs on the related contracts. Under the cost-to-cost measure of progress, the extent of progress towards completion is measured based on the ratio of costs incurred to date to the total estimated costs at completion of the performance obligation. Therefore, revenue is recognized proportionally as costs are incurred for these contracts.

Other considerations

We receive payment from customers equal to the invoice price for most of our sales transactions.

Returned products are generally not accepted unless the customer notifies the Company in writing, and we authorize the product return by the customer.

Unearned revenue is recorded cash consideration from customers in advance of the shipment of the goods, which is a liability on our Consolidated Balance Sheets. This contract liability is subsequently reversed and the revenue, cost of sales, and gross margin are recorded when the Company has transferred control of the product to the customer. The related inventory also remains on our balance sheet until these revenue recognition criteria are met. Advanced billings are typically made in association with products with long manufacturing times and/or products paid relating to contracts with the government. Billings in advance of the shipments allow us to collect cash earlier than billing at the time of the shipment and, therefore, the collected cash can be used to reduce our investment in working capital. Refer to Note B of the Consolidated Financial Statement for additional details on our contract balances.

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:

- Actual net sales, operating rates, and margins for 2018;
- The global economy;
- The impact of any U.S. Federal Government shutdowns and sequestrations;
- The condition of the markets which we serve, whether defined geographically or by segment, with the major market segments being: consumer electronics, industrial components, medical, automotive electronics, defense, telecommunications infrastructure, energy, commercial aerospace, and science;
- 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, including our ability to effectively integrate the acquisition of the high-performance target materials business of the Heraeus Group;

- 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 completion and start-up 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 financing fees, tax rates, exchange 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; and
- The risk factors set forth in Part 1, Item 1A of our Form 10-K for the year ended December 31, 2017 .

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 Annual Report on Form 10-K for the year ended December 31, 2017 . There have been no material changes in our market risks since the inclusion of this discussion in our 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 March 30, 2018 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 March 30, 2018 .

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 March 30, 2018 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

The Company adopted the new revenue recognition guidance under ASC 606 on January 1, 2018. Although ASC 606 is not expected to have a material impact on the Company's financial results, changes to the Company's processes and controls related to revenue recognition were implemented. These changes included creating new accounting policies based on the five-step model of ASC 606, implementing ongoing contract review requirements, and gathering information necessary for disclosures.

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.

The information presented in the Legal Proceedings section of Note N ("Contingencies") of the Notes to Consolidated Financial Statements (Unaudited) is incorporated herein by reference.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The following table presents information with respect to repurchases of common stock made by us during the three months ended March 30, 2018 .

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)
January 1 through February 2, 2018	4,495	\$ 51.86	—	\$ 15,703,744
February 3 through March 2, 2018	15,038	50.89	—	15,703,744
March 3 through March 30, 2018	22,504	50.42	—	15,703,744
Total	42,037	\$ 50.75	—	\$ 15,703,744

(1) Includes 4,495, 15,038, and 22,504 shares surrendered to the Company in January, February, and March, respectively, by employees to satisfy tax withholding obligations on equity awards issued under the Company's stock incentive plan.

(2) On January 14, 2014, we announced that our Board of Directors had authorized the repurchase of up to \$50.0 million of our common stock. We did not repurchase any shares under this program during the first quarter of 2018. As of March 30, 2018, \$15.7 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 6. Exhibits

10.1	<u>Form of 2018 Restricted Stock Unit Agreement</u> *
10.2	<u>Form of 2018 Performance-Based Restricted Stock Unit Agreement</u> *
31.1	<u>Certification of Chief Executive Officer required by Rule 13a-14(a) or 15d-14(a)</u> *
31.2	<u>Certification of Chief Financial Officer required by Rule 13a-14(a) or 15d-14(a)</u> *
32	<u>Certifications of Chief Executive Officer and Chief Financial Officer required by 18 U.S.C. Section 1350</u> *
95	<u>Mine Safety Disclosure Pursuant to Section 1503(a) of the Dodd-Frank Wall Street Reform and Consumer Protection Act for the period ended March 30, 2018</u> *
101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document*

*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: April 26, 2018

/s/ Joseph P. Kelley

Joseph P. Kelley

Vice President, Finance and Chief Financial Officer
(Principal Financial and Accounting Officer)

MATERION CORPORATION

EXHIBIT F

Restricted Stock Units Agreement (Stock-Settled)

WHEREAS, _____, (the “Grantee”) is an employee of Materion Corporation, an Ohio corporation (the “Corporation”) or a Subsidiary; and

WHEREAS, the execution of an agreement in the form hereof (this “Agreement”) has been authorized by a resolution of the Compensation Committee (the “Committee”) of the Board of Directors of the Corporation that was duly adopted on February __, 2018.

NOW, THEREFORE, pursuant to the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the “Plan”), the Corporation hereby confirms to the Grantee the grant, effective on February __, 2018 (the “Date of Grant”), of _____ Restricted Stock Units (as defined in the Plan) (“RSUs”), subject to the terms and conditions of the Plan and the following additional terms, conditions, limitations and restrictions:

Article I

DEFINITIONS

All terms used herein with initial capital letters that are defined in the Plan shall have the meanings assigned to them in the Plan when used herein with initial capital letters.

ARTICLE II

CERTAIN TERMS OF RESTRICTED STOCK UNITS

1. RSUs Not Transferable. The RSUs covered by the Agreement shall not be transferable other than by will or pursuant to the laws of descent and distribution prior to payment.

2. Vesting and Payment of RSUs.

(a) General. Subject to the provisions of Sections 2(b), 2(c) and 2(d) of this Article II, all of the RSUs covered by this Agreement shall become nonforfeitable if the Grantee shall have remained in the continuous employ of the Corporation or a Subsidiary for three years from the Date of Grant and shall be payable by the issuance of Common Shares to the Grantee on such date.

(b) Death or Disability. Notwithstanding the provisions of Section 2(a) of this Article II, all of the RSUs covered by this Agreement shall immediately become nonforfeitable and shall be immediately payable if the Grantee dies or becomes permanently disabled (as hereinafter defined) while in the employ of the Corporation or a Subsidiary during the three-year period from the Date of Grant. The Grantee shall be considered to have become permanently disabled if the Grantee has suffered a permanent disability within the meaning of the long-term disability plan in effect for, or applicable to, the Grantee and is "disabled" within the meaning of Section 409A(a)(2)(C) of the Code.

(c) Retirement.

(i) If the Grantee should Retire (as hereinafter defined) after the Date of Grant, the RSUs covered by this Agreement shall be forfeited, unless the Committee determines that, notwithstanding the requirement of continuous employment contained in Section 2(a) of this Article II, such RSUs will continue to vest and become payable three years from the Date of Grant, provided that if the Committee makes such a determination, the RSUs will also be paid on any earlier date when payment would otherwise have been made under Section 2 of this Article II if the Grantee had continued employment through such date.

(ii) “Retire” shall mean the Grantee’s retirement from the Corporation or a Subsidiary at (A) age 65 or older or (B) at age 55 or older with 10 or more years of continuous employment with the Corporation or a Subsidiary.

(d) Change in Control.

(i) Notwithstanding Section 2(a) of this Article II above, the RSUs granted hereby shall immediately become nonforfeitable and payable if at any time during the employment of the Grantee and prior to the end of the three-year vesting period:

(A) a Change in Control shall occur after the Date of Grant; and

(B) within two years following the Change in Control the Grantee’s employment with the Corporation or a Subsidiary is terminated by the Grantee as a Termination for Good Cause (as defined in Section 2(f) of this Article) or the Grantee is terminated by the Corporation other than as a Termination for Cause (as defined in Section 2(e) of this Article II). If the Change in Control constitutes a “change in control” for purposes of Section 409A of the Code and if the Grantee incurs a “separation from service” for purposes of Section 409A of the Code within two years following such Change in Control, payment for any RSUs which are no longer subject to a substantial risk of forfeiture will be made upon the Grantee’s separation from service, provided however, that if at such time the Grantee is a “specified employee” as determined pursuant to the identification methodology adopted by the Corporation in compliance with Section 409A of the Code, the date of payment for the RSUs shall be the first business day of the

seventh month after the date of the Grantee's separation from service (or if earlier the Grantee's death). If payment is not made pursuant to the preceding sentence because the Change in Control does not constitute a "change in control" for purposes of Section 409A of the Code, then payment shall be made at the earliest date that payment otherwise would have been made under Section 2 of this Article II if no Change in Control had occurred, assuming continued employment through such date.

(ii) Notwithstanding anything in this Section 2(d) to the contrary, in connection with a Business Combination, the result of which is that the Outstanding Company Voting Securities are exchanged for or become exchangeable for securities of another entity, cash or a combination thereof, if the entity resulting from such Business Combination does not assume the RSUs evidenced hereby and the Corporation's obligations hereunder, or replace the RSUs evidenced hereby with a substantially equivalent security of the entity resulting from such Business Combination, then the RSUs evidenced hereby shall become nonforfeitable as of immediately prior to such Business Combination. Payment for any RSUs which are no longer subject to a substantial risk of forfeiture as determined under the original terms of this award will be upon the Change in Control; provided, however, if the Change in Control does not constitute a "change in control" for purposes of Section 409A(a)(2)(A)(v) of the Code, then payment for the RSUs will be made upon the date that payment otherwise would have been made under Section 2 of this Article II if no Change in Control had occurred, assuming continued employment through such date.

(e) "Termination for Cause" means a termination of Grantee's employment by the Corporation for "Cause" (as defined in Section 7(f) of this Article II).

(f) "Termination for Good Cause" shall mean the Grantee's termination of the Grantee's employment with the Corporation or a Subsidiary as a result of the occurrence of any of the following:

(i) a change in the Grantee's principal location of employment that is greater than 50 miles from its location as of the date hereof without the Grantee's consent; provided, however, that the Grantee hereby acknowledges that the Grantee may be required to engage in travel in connection with the performance of the Grantee's duties hereunder and that such travel shall not constitute a change in the Grantee's principal location of employment for purposes hereof;

(ii) a material diminution in the Grantee's base compensation;

(iii) a change in the Grantee's position with the Corporation without the Grantee's consent such that there is a material diminution in the Grantee's authority, duties or responsibilities; or

(iv) any other action or inaction that constitutes a material breach by the Corporation of the agreement under which the Grantee provides services.

Notwithstanding the foregoing, the Grantee's termination of the Grantee's employment with the Corporation as a result of the occurrence of any of the foregoing shall not constitute a "Termination for Good Cause" unless (A) the Grantee gives the Corporation written notice of such occurrence within 90 days of such occurrence and such occurrence is not cured by the Corporation within 30 days of the date on which such written notice is received by the Corporation and (B) the Grantee actually terminates his or her employment with the Corporation prior to the 365th day following such occurrence.

3. Form and Time of Payment of RSUs/Withholding Taxes. Except as otherwise provided for in Section 2 of Article III, payment for the RSUs shall be made in form of the Common Shares at the time the RSUs vest and become nonforfeitable or otherwise become payable in accordance with Section 2 of this Article II. To the extent that the Corporation is required to withhold federal, state, local or foreign taxes or other amounts in connection with the delivery of Common Shares to the Grantee or any other person under this Agreement, the number of Common Shares to be delivered to the Grantee or such other person shall be reduced (based on the Market Value per Share as of the date the RSUs are reduced) to provide for the taxes required to be withheld with any fractional shares that would otherwise be delivered being rounded up to the next nearest whole share. In no event will the market value of the Common Shares to be withheld and delivered pursuant to this Section to satisfy applicable withholding taxes exceed the minimum amount required to be withheld, unless (a) an additional amount can be withheld or delivered, and not result in adverse accounting or other consequences as reasonably determined by the Committee (it being understood that the failure of such reasonable determination to be correct shall not constitute a violation of the terms of the Plan), and (b) it is permitted by the Committee.

4. Forfeiture of RSUs. The RSUs shall be forfeited, except as otherwise provided in Section 2(b), 2(c) or 2(d) of this Article II above, if the Grantee ceases to be employed by the Corporation or a Subsidiary prior to three years from the Date of Grant.

5. Dividend Equivalents. From and after the Date of Grant and until the earlier of (a) the time when the RSUs vest and become nonforfeitable and payable in accordance with Section 2 of this Article II or (b) the time when the Grantee's right to receive Common Shares in payment of the RSUs is forfeited in accordance with Section 4 of this Article II, on the date that the Corporation pays a cash dividend (if any) to holders of Common Shares generally, the Grantee shall be entitled to a number of additional whole RSUs (rounded up or

down to the nearest whole RSU) determined by dividing (i) the product of (A) the dollar amount of the cash dividend paid per Common Share on such date and (B) the total number of RSUs covered by this Agreement (including dividend equivalents paid thereon) previously credited to the Grantee as of such date, by (ii) the Market Value per Share on such date. Such dividend equivalents (if any) shall be subject to the same terms and conditions and shall be paid or forfeited in the same manner and at the same time as the RSUs to which the dividend equivalents were credited.

6. Effect of Detrimental Activity. Notwithstanding anything herein to the contrary, if the Grantee, either during employment by the Corporation or a Subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity, (as hereinafter defined) and the Board shall so find, the Grantee shall:

(a) Forfeit all RSUs held by the Grantee.

(b) Return to the Corporation all Common Shares that the Grantee has not disposed of that were paid out pursuant to this Agreement within a period of one year prior to the date of the commencement of such Detrimental Activity.

(c) With respect to any Common Shares that the Grantee has disposed of that were paid out pursuant to this Agreement within a period of one year prior to the date of the commencement of such Detrimental Activity, pay to the Corporation in cash the value of such Common Shares on the date such Common Shares were paid out.

(d) To the extent that the amounts referred to above in Section 6(b) and 6(c) of this Article II are not paid to the Corporation, the Corporation may set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason, except that no

setoff shall be permitted against any amount that constitutes "deferred compensation" within the meaning of Section 409A of the Code.

7. For purposes of this Agreement, the term "Detrimental Activity" shall include:

(a) (1) Engaging in any activity in violation of the Section entitled "Competitive Activity; Confidentiality; Nonsolicitation" in the Severance Agreement between the Corporation and the Grantee, if such agreement is in effect at the date hereof, or in violation of any corresponding provision in any other agreement between the Corporation and the Grantee in effect on the date hereof providing for the payment of severance compensation; or

(i) If no such severance agreement is in effect as of the date hereof or if a severance agreement does not contain a Section corresponding to "Competitive Activity; Confidentiality; Nonsolicitation":

(A) Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee's employment, including, without limitation:

(I) entering into or engaging in any business which competes with the business of the Corporation;

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

(B) Following Termination. For a period of one year following the Grantee's termination date:

(I) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);

(II) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business, wherever located, that competes with, the Corporation's business within the Restricted Territory;

(III) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or

(IV) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 7(a)(ii)(A) and (B) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a

stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

(C) "The Corporation." For the purposes of this Section 7(a)(ii) of Article II, the "Corporation" shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee's employment and at any time during the two year period prior to such termination.

(D) "The Corporation's Business." For the purposes of this Section 7 of Article II inclusive, the Corporation's business is defined to be the integrated production of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications serving the consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.

(E) "Restricted Territory." For the purposes of Section 7(a)(ii)(B) of Article II, the Restricted Territory shall be defined as and limited to:

(I) the geographic area(s) within a one hundred mile radius of any and all of the Corporation's location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility

(either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination; and

(II) all of the specific customer accounts, whether within or outside of the geographic area described in (I) above, with which the Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee's employment and at any time during the two-year period prior to such termination.

(F) Extension. If it shall be judicially determined that the Grantee has violated any of the Grantee's obligations under Section 7(a)(ii)(B) of Article II, then the period applicable to each obligation that the Grantee shall have been determined to have violated shall automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(b) Non-Solicitation. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(c) Further Covenants. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making

available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the

originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 7(c)(i) of Article II of this Agreement.

(d) Discoveries and Inventions. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(e) Work Made For Hire. Except as otherwise provided in Section 7(a)(i) of Article II, Detrimental Activity shall also include violation of the Corporation's rights in any

or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefore, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will contain all proper copyright notices, e.g., "(creation date) [Corporation's Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(f) Termination for Cause. Except as otherwise provided in Section 8(a)(i) of Article II, Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section, "Cause" shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation;

and any such act shall have been demonstrably and materially harmful to the Corporation.

(g) Other Injurious Conduct. Detrimental Activity shall also include any action contributing to a restatement of the Corporation's financials if this award of RSUs to the Grantee is favorably affected by such restatement as provided under Section 10D of the Exchange Act and any applicable rules or regulations promulgated by the Securities and Exchange Commission or any national securities exchange or national securities association on which the Common Shares may be traded, and any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(h) Reasonableness. The Grantee acknowledges that the Grantee's obligations under this Section 7 of Article II are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the Corporation if the Grantee were to violate such obligations. The Grantee further acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

(i) Acknowledgement. Notwithstanding anything in this Agreement to the contrary, nothing in this Agreement prevents the Grantee from providing, without prior notice to the Corporation, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

ARTICLE III

GENERAL PROVISIONS

1. Compliance with Law. The Corporation shall make reasonable efforts to comply with all applicable federal and state securities laws.
2. Dilution and Other Adjustments. The Committee shall make such adjustments in the RSUs covered by this Agreement as such Committee in its sole discretion, exercised in good faith, shall determine is equitably required to prevent dilution or enlargement of the rights of the Grantee that otherwise would result from (a) any stock dividend, stock split, combination of shares, recapitalization or other change in the capital structure of the Corporation, or (b) any merger, consolidation, spin-off, reorganization, partial or complete liquidation or other distribution of assets, or issuance of warrants or other rights to purchase securities, or (c) any other corporate transaction or event having an effect similar to any of the foregoing. In the event of any such transaction or event, the Committee shall provide in substitution for this award of RSUs such alternative consideration as it shall in good faith determine to be equitable under the circumstances and shall require in connection therewith the surrender of this award of RSUs so replaced.
3. Continuous Employment. For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.
4. No Employment Contract; Right to Terminate Employment. The grant of the RSUs to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the RSUs and

any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

5. Relation to Other Benefits. Any economic or other benefit to the Grantee under this Agreement or the Plan shall not be taken into account in determining any benefits to which the Grantee may be entitled under any profit-sharing, retirement or other benefit or compensation plan maintained by the Corporation or a Subsidiary and shall not affect the amount of any life insurance coverage available to any beneficiary under any life insurance plan covering employees of the Corporation or a Subsidiary.

6. Information. Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

7. Amendments. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's consent. Notwithstanding the foregoing, the limitation requiring the consent of a Grantee to certain amendments shall not apply to any amendment

that is deemed necessary by the Corporation to ensure compliance with Section 409A of the Code.

8. Severability. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

9. Governing Law. This Agreement is made under, and shall be construed in accordance with, the internal substantive laws of the State of Ohio.

10. Compliance with Section 409A of the Code. To the extent applicable, it is intended that this Agreement and the Plan comply with the provisions of Section 409A of the Code, so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee. This Agreement and the Plan shall be administered in a manner consistent with this intent. Reference to Section 409A of the Code is to Section 409A of the Internal Revenue Code of 1986, as amended, and will also include any regulations or any other formal guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service.

11. Relation to Severance Agreement. Section 2(d) of Article II hereof shall supersede the provisions of any Severance Agreement between the Grantee and the Corporation, in effect at the Date of Grant, providing for earlier vesting of the RSUs granted hereby in the event of a Change in Control.

The undersigned Grantee hereby accepts the award granted pursuant to this Agreement on the terms and conditions set forth herein.

Dated: ____

Grantee

Executed in the name of and on behalf of the Corporation at Mayfield Heights, Ohio as of this ____ day of _____

2018.

MATERION CORPORATION

By ____
Christopher E. Eberhardt
Vice President, Tax & Treasury

MATERION CORPORATION

EXHIBIT A

Performance-Based Restricted Stock Units Agreement

WHEREAS, _____ (the “Grantee”) is an employee of Materion Corporation, an Ohio corporation (the “Corporation”), or a Subsidiary; and

WHEREAS, the execution of an agreement in the form hereof (this “Agreement”) has been authorized by resolution of the Compensation Committee (the “Committee”) of the Board of Directors of the Corporation that was duly adopted on February __, 2018.

NOW, THEREFORE, pursuant to the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the “Plan”), and subject to the terms and conditions thereof and the terms and conditions hereinafter set forth, the Corporation hereby confirms to the Grantee the grant of (1) a targeted number of _____ performance-based Restricted Stock Units to be earned, if at all, on the basis of the achievement of the portion of the Management Objectives measured by ROIC goals during the Performance Period (as defined below) (the “ROIC PRSUs”), and (2) a targeted number of _____ performance-based Restricted Stock Units to be earned, if at all, on the basis of the achievement of the portion of the Management Objectives measured by RTSR goals during the Performance Period (the “RTSR PRSUs” and, together with the ROIC PRSUs, the “PRSUs”), effective on February __, 2018 (the “Date of Grant”). Subject to the attainment of the Management Objectives described in Section 3 of Article II of this Agreement and the Statement of Management Objectives as approved by the Compensation Committee with respect to the PRSUs on the Date of Grant (the “Statement of

Management Objectives”), the Grantee may earn from 0% and 200% of the ROIC PRSUs and from 0% and 200% of the RTSR PRSUs.

ARTICLE I

DEFINITIONS

All terms used herein with initial capital letters that are defined in the Plan shall have the meanings assigned to them in the Plan, and the following additional terms, when used herein with initial capital letters, shall have the following meanings:

1. “Committee Determination Date” means the date following the end of the Performance Period on which the Committee determines the level of attainment of the Management Objectives for the Performance Period.
2. “Management Objectives” means the threshold, target and maximum goals established by the Committee for the Performance Period with respect to both ROIC and RTSR as described in the Statement of Management Objectives.
3. “Performance Period” means the three-year period commencing January 1, 2018 and ending on December 31, 2020.
4. “Relative Total Shareholder Return” or “RTSR” has the meaning as set forth in the Statement of Management Objectives.
5. “Return on Invested Capital” or “ROIC” has the meaning as set forth in the Statement of Management Objectives.

ARTICLE II

CERTAIN TERMS OF PRSUs

1. Payment of PRSUs. The PRSUs covered by this Agreement shall become payable to the Grantee if they become nonforfeitable in accordance with Sections 3, 4, 5 or 6 of Article II.
2. PRSUs Non-Transferable. The PRSUs covered by this Agreement and any interest therein may be transferred or assigned only by will or pursuant to the laws of descent and distribution prior to payment therefor.
3. Normal Vesting of PRSUs. Subject to the terms and conditions of Sections 4, 5 and 6 of Article II, the Grantee's right to receive Common Shares for the ROIC PRSUs and/or Common Shares for the RTSR PRSUs, as applicable, shall become nonforfeitable with respect to (a) 0% to 200% of the ROIC PRSUs on the basis of the achievement of the portion of the Management Objectives measured by ROIC goals during the Performance Period, and (b) 0% and 200% of the RTSR PRSUs on the basis of the achievement of the portion of the Management Objectives measured by RTSR goals during the Performance Period, in each case as set forth in the Statement of Management Objectives. Except as otherwise provided herein, the Grantee's right to receive Common Shares for the ROIC PRSUs and/or Common Shares for the RTSR PRSUs, as applicable, is contingent upon his or her remaining in the continuous employ of the Company or a Subsidiary until the end of the Performance Period.
4. Effect of Termination due to Death or Disability. Notwithstanding the provisions of Section 3 of Article II, 100% of the PRSUs shall immediately become nonforfeitable and payable at the time described in Section 8 of Article II if the Grantee dies or becomes permanently disabled while in the employ of the Corporation or a Subsidiary before the Committee Determination Date. The Grantee shall be considered to have become permanently disabled if the Grantee has suffered a permanent disability within the meaning of the long-term

disability plan in effect for, or applicable to, the Grantee and is “disabled” within the meaning of Section 409A(a)(2)(C) of the Code.

5. Effect of Termination due to Retirement. Notwithstanding the continuous employment provision of Section 3 of Article II above, but subject to the provisions of Section 6 of Article II below, if the Grantee is at the time of such termination (a) at least age 65 or (b) at least age 55 and has completed at least 10 years of continuous with the Corporation or a Subsidiary, the PRSUs covered by this Agreement shall continue to be eligible to become nonforfeitable in accordance with Section 3 of this Article (and payable in accordance with Section 8 of Article II) as if the Grantee continued to be employed until the end of the Performance Period.

6. Change in Control. Notwithstanding Sections 3 and 5 of Article II above, the following alternative nonforfeitability provisions will apply to the PRSUs in the event of a Change in Control occurring after the Date of Grant and prior to the PRSUs becoming nonforfeitable in accordance with Section 3 of Article II:

(a) Upon the Change in Control, 100% of the PRSUs shall become nonforfeitable and payable in accordance with Section 8 of Article II, except to the extent that an award meeting the requirements of Section 6(b) of Article II (a “Replacement Award”) is provided to the Grantee in accordance with Section 6(b) of Article II to replace or adjust the award of PRSUs covered by this Agreement (the “Replaced Award”).

(b) For purposes of this Agreement, a “Replacement Award” means an award (i) of the same type (*e.g.* , performance-based restricted stock units) as the Replaced Award, (ii) that has a value at least equal to the value of the Replaced Award, (iii) that relates to publicly traded equity securities of the Corporation or its successor in the Change in Control or another entity that is affiliated with the Corporation or its successor following the Change in Control, (iv) if the Grantee holding the Replaced Award is subject to U.S. federal income tax under the Code, the tax consequences of which to such Grantee under the Code are not less favorable to such Grantee than the tax consequences of the Replaced Award, and (v) the other terms and conditions of which are not less favorable to the Grantee holding the Replaced Award than the terms and conditions of the Replaced Award (including the provisions that would apply in the event of a

subsequent Change in Control). A Replacement Award may be granted only to the extent it does not result in the Replaced Award or Replacement Award failing to comply with or be exempt from Section 409A of the Code. Without limiting the generality of the foregoing, the Replacement Award may take the form of a continuation of the Replaced Award if the requirements of the two preceding sentences are satisfied. The determination of whether the conditions of this Section 6(b) of Article II are satisfied will be made by the Committee, as constituted immediately before the Change in Control, in its sole discretion.

(c) If, upon receiving a Replacement Award, the Grantee's employment with the Corporation or a Subsidiary (or any of their successors) (as applicable, the "Successor") is terminated by the Grantee as a Termination for Good Cause or if the Grantee is terminated by the Successor other than as a Termination for Cause within a period of two years after the Change in Control, 100% of the Replacement Award will become nonforfeitable and payable in accordance with Section 8 of Article II with respect to the performance-based restricted stock units covered thereby.

(d) "Termination for Cause" means a termination of Grantee's employment by the Successor for "Cause" (as defined in Section 10(f) of Article II).

(e) "Termination for Good Cause" shall mean the Grantee's termination of the Grantee's employment with the Successor as a result of the occurrence of any of the following:

(i) a change in the Grantee's principal location of employment that is greater than 50 miles from such location as of the date of this Agreement without the Grantee's consent; provided, however, that the Grantee hereby acknowledges that the Grantee may be required to engage in travel in connection with the performance of the Grantee's duties hereunder and that such travel shall not constitute a change in the Grantee's principal location of employment for purposes hereof;

(ii) a material diminution in the Grantee's base compensation;

(iii) a change in the Grantee's position with the Successor without the Grantee's consent such that there is a material diminution in the Grantee's authority, duties or responsibilities; or

(iv) any other action or inaction that constitutes a material breach by the Successor of the agreement, if any, under which the Grantee provides services to the Successor or its subsidiaries.

Notwithstanding the foregoing, the Grantee's termination of the Grantee's employment with the Successor as a result of the occurrence of any of the foregoing shall not constitute a "Termination for Good Cause" unless (A) the Grantee gives the Successor written notice of such occurrence within 90 days of such occurrence and such occurrence is not cured by the Successor within 30 days of the date on which such written notice is received by the Successor and (B) the Grantee actually terminates his or her employment with the Successor prior to the 365th day following such occurrence.

(f) If a Replacement Award is provided, notwithstanding anything in this Agreement to the contrary, any outstanding PRSUs which at the time of the Change in Control are not subject to a "substantial risk of forfeiture" (within the meaning of Section 409A of the Code) will be deemed to be nonforfeitable at the time of such Change in Control and will be paid as provided for in Section 8(b) of Article II.

7. Forfeiture of PRSUs. The PRSUs shall be forfeited to the extent they fail to become nonforfeitable as of the Committee Determination Date and, except as otherwise provided in Sections 4, 5 or 6 of Article II, if the Grantee ceases to be employed by the Corporation or a Subsidiary at any time prior to such PRSUs becoming nonforfeitable, or to the extent they are forfeited as provided in Section 9 of Article II.

8. Form and Time of Payment of PRSUs.

(a) General. Except as otherwise provided for in Section 2 of Article III, and subject to Section 7 and Section 8(b) of Article II, payment for the PRSUs that have become nonforfeitable in accordance with Sections 3, 4, 5 or 6 of Article II shall be made in the form of Common Shares between January 1, 2021 and March 15, 2021.

(b) Alternative Payment Events. Notwithstanding Section 8(a) of Article II, and except as otherwise provided for in Section 2 of Article III, to the extent that PRSUs have become nonforfeitable, then any issuance of the Common Shares underlying such PRSUs (or payment of any other form of consideration into which the Common Shares underlying such PRSUs may have been converted) will be made on an earlier date as follows:

(i) Death. To the extent that PRSUs are nonforfeitable on the date of Grantee's death, payment for the PRSUs will be made on the date of Grantee's death;

(ii) Disability. To the extent that PRSUs are nonforfeitable on the date the Grantee becomes "disabled" within the meaning of Section 409A(a)(2)(C) of the Code, payment for the PRSUs will be made on the date the Grantee becomes disabled;

(iii) Separation from Service. To the extent that PRSUs are nonforfeitable on the date of Grantee's "separation from service" (determined in accordance with Section 409A of the Code), payment for the PRSUs will be made on the date of Grantee's "separation from service"; provided, however, that if the Grantee on the date of separation from service is a "specified employee" (within the meaning of Section 409A of the Code determined using the identification methodology selected by the Company from time to time), payment for the PRSUs will be made on the first day of the seventh month after the date of Grantee's separation from service or, if earlier, the date of Grantee's death; and

(iv) Change of Control. To the extent that PRSUs are nonforfeitable on the date of a Change in Control, payment for the PRSUs will be made on the date of the Change of Control; provided, however, that if such Change in Control would not qualify as a permissible date of distribution under Section 409A(a)(2)(A) of the Code, and the regulations thereunder, and where Section 409A of the Code applies to such distribution, payment will be made on the date that would have otherwise applied pursuant to Section 8.

9. Effect of Detrimental Activity. Notwithstanding anything herein to the contrary (other than Section 11 of Article III), if the Grantee, either during employment by the Corporation or a Subsidiary or within one year after termination of such employment, shall engage in any Detrimental Activity (as defined in Section 10 below) and the Board shall so find, then the Grantee shall, upon notice of such finding:

(a) Forfeit all PRSUs held by the Grantee.

(b) With respect to any PRSUs that became nonforfeitable and were paid pursuant to this Agreement, return to the Corporation any and all Common Shares that were paid out under this Agreement that the Grantee has not then disposed of.

(c) With respect to any and all Common Shares subject to the PRSUs covered by this Agreement that (i) became nonforfeitable and were paid pursuant to this Agreement within a period of one year prior to the date of the commencement of such Detrimental Activity and (ii) the Grantee has disposed of, pay to the Corporation the cash value of such Common Shares on the date the respective PRSUs were paid.

(d) To the extent that such amounts are not paid to the Corporation, the Corporation may, to the extent permitted by law, set off the amounts so payable to it against any amounts that may be owing from time to time by the Corporation or a Subsidiary to the Grantee, whether as wages, deferred compensation or vacation pay or in the form of any other benefit or for any other reason, except that no such set-off shall be permitted against any amount that constitutes “deferred compensation” within the meaning of Section 409A of the Code.

10. Definition of Detrimental Activity. For purposes of this Agreement, the term “Detrimental Activity” shall include:

(a) (i) Engaging in any activity in violation of the section entitled “Competitive Activity; Confidentiality; Nonsolicitation” in the Severance Agreement between the Corporation and the Grantee, if any such agreement is in effect on the date of this Agreement, or in violation of any corresponding provision in any other agreement between the Corporation and the Grantee in effect on the date of this Agreement providing for the payment of severance compensation; or

(ii) If no such severance agreement is in effect as of the date of this Agreement, or if such severance agreement does not contain a section corresponding to “Competitive Activity; Confidentiality; Nonsolicitation”:

A. Competitive Activity During Employment. Competing with the Corporation anywhere within the United States during the term of the Grantee’s employment, including, without limitation:

- (1) entering into or engaging in any business which competes with the business of the Corporation;
- (2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business that competes with, the business of the Corporation;
- (3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation or attempting to do so; or

- (4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the business of the Corporation.

B. Following Termination. For a period of one year following the Grantee's termination date:

- (1) entering into or engaging in any business which competes with the Corporation's business within the Restricted Territory (as hereinafter defined);
- (2) soliciting customers, business, patronage or orders for, or selling, any products or services in competition with, or for any business, wherever located, that competes with, the Corporation's business within the Restricted Territory;
- (3) diverting, enticing or otherwise taking away any customers, business, patronage or orders of the Corporation within the Restricted Territory, or attempting to do so; or
- (4) promoting or assisting, financially or otherwise, any person, firm, association, partnership, corporation or other entity engaged in any business which competes with the Corporation's business within the Restricted Territory.

For the purposes of Sections 10(a)(ii)(A) and (B) above, inclusive, but without limitation thereof, the Grantee will be in violation thereof if the Grantee engages in any or all of the activities set forth therein directly as an individual on the Grantee's own account, or indirectly as a partner, joint venturer, employee, agent, salesperson, consultant, officer and/or director of any firm, association, partnership, corporation or other entity, or as a stockholder of any corporation in which the Grantee or the Grantee's spouse, child or parent owns, directly or indirectly, individually or in the aggregate, more than five percent (5%) of the outstanding stock.

- C. The “Corporation.” For the purposes of this Section 10(a)(ii) of Article II, the “Corporation” shall include any and all direct and indirect subsidiaries, parents, and affiliated, or related companies of the Corporation for which the Grantee worked or had responsibility at the time of termination of the Grantee’s employment and at any time during the two-year period prior to such termination.
- D. The “Corporation’s Business.” For the purposes of this Section 10 of Article II inclusive, the Corporation’s business is defined to be the integrated production of high performance advanced engineered materials used in a variety of electrical, electronic, thermal and structural applications serving the consumer electronics, industrial components and commercial aerospace, defense and science, medical, energy, automotive electronics, telecommunications infrastructure and appliance markets, as further described in any and all manufacturing, marketing and sales manuals and materials of the Corporation as the same may be altered, amended, supplemented or otherwise changed from time to time, or of any other products or services substantially similar to or readily substitutable for any such described products and services.
- E. “Restricted Territory.” For the purposes of Section 10(a)(ii)(B) of Article II, the “Restricted Territory” shall be defined as and limited to:
- (1) the geographic area(s) within a one hundred mile radius of any and all Corporation location(s) in, to, or for which the Grantee worked, to which the Grantee was assigned or had any responsibility (either direct or supervisory) at the time of termination of the Grantee’s employment and at any time during the two-year period prior to such termination; and
 - (2) all of the specific customer accounts, whether within or outside of the geographic area described in (1) above, with which the Grantee had any contact or for which the Grantee had any responsibility (either direct or supervisory) at the time of termination of the Grantee’s employment and at any time during the two-year period prior to such termination.
- F. “Extension.” If it shall be judicially determined that the Grantee has violated any of the Grantee’s obligations under Section 10(a)(ii)(B) of Article II of this Agreement, then the period applicable to each obligation that the Grantee shall have been determined to have violated shall

automatically be extended by a period of time equal in length to the period during which such violation(s) occurred.

(b) Non-Solicitation. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include directly or indirectly at any time soliciting or inducing or attempting to solicit or induce any employee(s), sales representative(s), agent(s) or consultant(s) of the Corporation and/or of its parents, or its other subsidiaries or affiliated or related companies to terminate their employment, representation or other association with the Corporation and/or its parent or its other subsidiary or affiliated or related companies.

(c) Further Covenants. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include:

(i) directly or indirectly, at any time during or after the Grantee's employment with the Corporation, disclosing, furnishing, disseminating, making available or, except in the course of performing the Grantee's duties of employment, using any trade secrets or confidential business and technical information of the Corporation or its customers or vendors, including without limitation as to when or how the Grantee may have acquired such information. Such confidential information shall include, without limitation, the Corporation's unique selling, manufacturing and servicing methods and business techniques, training, service and business manuals, promotional materials, training courses and other training and instructional materials, vendor and product information, customer and prospective customer lists, other customer and prospective customer information and other business information. The Grantee specifically acknowledges that all such confidential information, whether reduced to writing, maintained on any form of electronic media, or maintained in the Grantee's mind or memory and whether compiled by the Corporation, and/or the Grantee, derives independent economic value from not being readily known to or ascertainable by proper means by others who can obtain economic value from its disclosure or use, that reasonable efforts have been made by the Corporation to maintain the secrecy of such information, that such information is the sole property of the Corporation and that any retention and use of such information by the Grantee during the Grantee's employment with the Corporation (except in the course of performing the Grantee's duties and obligations to the Corporation) or after the termination of the Grantee's employment shall constitute a misappropriation of the Corporation's trade secrets.

(ii) Upon termination of the Grantee's employment with the Corporation, for any reason, the Grantee's failure to return to the Corporation, in good condition, all property of the Corporation, including without limitation, the

originals and all copies of any materials which contain, reflect, summarize, describe, analyze or refer or relate to any items of information listed in Section 10(c)(i) of Article II.

(d) Discoveries and Inventions. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include the failure or refusal of the Grantee to assign to the Corporation, its successors, assigns or nominees, all of the Grantee's rights to any discoveries, inventions and improvements, whether patentable or not, made, conceived or suggested, either solely or jointly with others, by the Grantee while in the Corporation's employ, whether in the course of the Grantee's employment with the use of the Corporation's time, material or facilities or that is in any way within or related to the existing or contemplated scope of the Corporation's business. Any discovery, invention or improvement relating to any subject matter with which the Corporation was concerned during the Grantee's employment and made, conceived or suggested by the Grantee, either solely or jointly with others, within one year following termination of the Grantee's employment under this Agreement or any successor agreements shall be irrebuttably presumed to have been so made, conceived or suggested in the course of such employment with the use of the Corporation's time, materials or facilities. Upon request by the Corporation with respect to any such discoveries, inventions or improvements, the Grantee will execute and deliver to the Corporation, at any time during or after the Grantee's employment, all appropriate documents for use in applying for, obtaining and maintaining such domestic and foreign patents as the Corporation may desire, and all proper assignments therefor, when so requested, at the expense of the Corporation, but without further or additional consideration.

(e) Work Made For Hire. Except as otherwise provided in Section 10(a)(i) of Article II, Detrimental Activity shall also include violation of the Corporation's rights in any or all work papers, reports, documentation, drawings, photographs, negatives, tapes and masters therefor, prototypes and other materials (hereinafter, "items"), including without limitation, any and all such items generated and maintained on any form of electronic media, generated by Grantee during the Grantee's employment with the Corporation. The Grantee acknowledges that, to the extent permitted by law, all such items shall be considered a "work made for hire" and that ownership of any and all copyrights in any and all such items shall belong to the Corporation. The item will recognize the Corporation as the copyright owner, will contain all proper copyright notices, e.g. , "(creation date) [Corporation Name], All Rights Reserved," and will be in condition to be registered or otherwise placed in compliance with registration or other statutory requirements throughout the world.

(f) Termination for Cause. Except as otherwise provided in Section 10(a)(i) of Agreement, Detrimental Activity shall also include activity that results in termination for Cause. For the purposes of this Section 10, "Cause" shall mean that, the Grantee shall have:

(i) been convicted of a criminal violation involving fraud, embezzlement, theft or violation of federal antitrust statutes or federal securities laws in connection with his duties or in the course of his employment with the Corporation or any affiliate of the Corporation;

(ii) committed intentional wrongful damage to property of the Corporation or any affiliate of the Corporation; or

(iii) committed intentional wrongful disclosure of secret processes or confidential information of the Corporation or any affiliate of the Corporation;

and any such act shall have been demonstrably and materially harmful to the Corporation.

(g) Other Injurious Conduct. Detrimental Activity shall also include any other conduct or act determined to be injurious, detrimental or prejudicial to any significant interest of the Corporation or any subsidiary unless the Grantee acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the Corporation.

(h) Reasonableness. The Grantee acknowledges that the Grantee's obligations under this Section 10 of Article II of this Agreement are reasonable in the context of the nature of the Corporation's business and the competitive injuries likely to be sustained by the Corporation if the Grantee were to violate such obligations. The Grantee further acknowledges that this Agreement is made in consideration of, and is adequately supported by the agreement of the Corporation to perform its obligations under this Agreement and by other consideration, which the Grantee acknowledges constitutes good, valuable and sufficient consideration.

(i) Acknowledgement. Notwithstanding anything in this Agreement to the contrary, nothing in this Agreement prevents the Grantee from providing, without prior notice to the Corporation, information to governmental authorities regarding possible legal violations or otherwise testifying or participating in any investigation or proceeding by any governmental authorities regarding possible legal violations, and for purpose of clarity the Grantee is not prohibited from providing information voluntarily to the Securities and Exchange Commission pursuant to Section 21F of the Exchange Act.

11. Dividend Equivalents. From and after the Date of Grant and until the earlier of (a) the time when the PRSUs become nonforfeitable and are paid in accordance with Sections 3 and 8 of Article II or (b) the time when the Grantee's right to receive Common Shares in payment of the PRSUs is forfeited in accordance with Section 7 of Article II, on the date that the

Corporation pays a cash dividend (if any) to holders of Common Shares generally, the Grantee shall be entitled to a number of additional whole PRSUs (rounded up or down to the nearest whole PRSU) determined by dividing (i) the product of (A) the dollar amount of the cash dividend paid per Common Share on such date and (B) the total number of PRSUs covered by this Agreement (including dividend equivalents paid thereon) previously credited to the Grantee as of such date, by (ii) the Market Value per Share on such date. Such dividend equivalents (if any) shall be subject to the same terms and conditions and shall be paid or forfeited in the same manner and at the same time as the PRSUs to which the dividend equivalents were credited.

12. Relation to Severance Agreement. Sections 6 and 8 of Article II shall supersede the provisions of any severance agreement between the Grantee and the Corporation in effect on the Date of Grant that provide for earlier vesting or payment of the PRSUs covered by this Agreement in the event of a Change in Control.

ARTICLE III

GENERAL PROVISIONS

1. Compliance with Law. The Corporation shall make reasonable efforts to comply with all applicable federal and state securities laws; provided, however, notwithstanding any other provision of this Agreement, the Corporation shall not be obligated to issue any Common Shares pursuant to this Agreement if the issuance thereof would result in a violation of any such law.

2. Dilution and Other Adjustments. Subject to the terms of the Plan, the Committee shall make or provide for such adjustments in the Management Objectives and/or PRSUs covered by this Agreement as the Committee in its sole discretion, exercised in good faith, shall determine is equitably required to prevent dilution or enlargement of the rights of the Grantee

that otherwise would result from (a) any stock dividend, stock split, combination of shares, recapitalization or other change in the capital structure of the Corporation, or (b) any merger, consolidation, spin-off, spin-out, split-off, split-up, reorganization, partial or complete liquidation or other distribution of assets, or issuance of warrants or other rights to purchase securities, or (c) any other corporate transaction or event having an effect similar to any of the foregoing. In the event of any such transaction or event, the Committee shall provide in substitution for the PRSUs such alternative consideration (including cash) as it shall in good faith determine to be equitable under the circumstances and shall require in connection therewith the surrender of the PRSUs so replaced.

3. Withholding Taxes. If the Corporation or any Subsidiary shall be required to withhold any federal, state, local or foreign tax or other amounts in connection with any issuance, vesting or payment of Common Shares or other securities pursuant to this Agreement, the Grantee shall pay the tax or make arrangements that are satisfactory to the Corporation or such Subsidiary for the payment thereof. With respect to the PRSUs, the Grantee shall satisfy such withholding obligation by surrendering to the Corporation or such Subsidiary a portion of the Common Shares subject to the PRSUs that are covered by this Agreement and the Common Shares so surrendered by the Grantee shall be credited against any such withholding obligation at the Market Value per Share of such Common Shares on the date of such surrender. In no event shall the market value of the Common Shares to be withheld and delivered pursuant to this Section 3 of Article III to satisfy applicable withholding taxes exceed the minimum amount required to be withheld, unless (a) an additional amount can be withheld or delivered, and not result in adverse accounting or other consequences as reasonably determined by the Committee

(it being understood that the failure of such reasonable determination to be correct shall not constitute a violation of the terms of the Plan), and (b) it is permitted by the Committee.

4. Continuous Employment. For purposes of this Agreement, the continuous employment of the Grantee with the Corporation or a Subsidiary shall not be deemed to have been interrupted, and the Grantee shall not be deemed to have ceased to be an employee of the Corporation or a Subsidiary, by reason of the transfer of his employment among the Corporation and its Subsidiaries or a leave of absence approved by the Board.

5. No Employment Contract; Right to Terminate Employment. The grant of the PRSUs covered by this Agreement to the Grantee is a voluntary, discretionary award being made on a one-time basis and it does not constitute a commitment to make any future awards. The grant of the PRSUs under this Agreement and any payments made hereunder will not be considered salary or other compensation for purposes of any severance pay or similar allowance, except as otherwise required by law. Nothing in this Agreement will give the Grantee any right to continue employment with the Corporation or any Subsidiary, as the case may be, or interfere in any way with the right of the Corporation or a Subsidiary to terminate the employment of the Grantee at any time.

6. Information. Information about the Grantee and the Grantee's participation in the Plan may be collected, recorded and held, used and disclosed for any purpose related to the administration of the Plan. The Grantee understands that such processing of this information may need to be carried out by the Corporation and its Subsidiaries and by third party administrators whether such persons are located within the Grantee's country or elsewhere, including the United States of America. The Grantee consents to the processing of information

relating to the Grantee and the Grantee's participation in the Plan in any one or more of the ways referred to above.

7. Amendments. Any amendment to the Plan shall be deemed to be an amendment to this Agreement to the extent that the amendment is applicable hereto; provided, however, that no amendment shall adversely affect the rights of the Grantee under this Agreement without the Grantee's consent (provided, however, that the Grantee's consent shall not be required to an amendment that is deemed necessary by the Corporation to comply with Section 409A of the Code).

8. Severability. In the event that one or more of the provisions of this Agreement shall be invalidated for any reason by a court of competent jurisdiction, any provision so invalidated shall be deemed to be separable from the other provisions hereof, and the remaining provisions hereof shall continue to be valid and fully enforceable.

9. Governing Law. This Agreement is made under, and shall be construed in accordance with, the internal substantive laws of the State of Ohio.

10. Compliance with Section 409A of the Code. To the extent applicable, it is intended that this Agreement and the Plan comply with the provisions of Section 409A of the Code, so that the income inclusion provisions of Section 409A(a)(1) of the Code do not apply to the Grantee. This Agreement and the Plan shall be administered in a manner consistent with this intent. Reference to Section 409A of the Code is to Section 409A of the Internal Revenue Code of 1986, as amended, and will also include any proposed, temporary or final regulations, or any other guidance promulgated with respect to such Section by the U.S. Department of the Treasury or the Internal Revenue Service.

11. Subject to Clawback Policy. Notwithstanding anything in this Agreement to the contrary, subject to any contrary determination by the Committee, the Grantee acknowledges and agrees that this Agreement and the PRSUs covered by this Agreement are subject to the terms and provisions of the Corporation's clawback policy (if any) as may be in effect from time to time to the extent provided for under such policies, including specifically to implement Section 10D of the Exchange Act and any applicable rules or regulations promulgated thereunder (including applicable rules and regulations of any national securities exchange on which the Common Shares may be traded) (the "Compensation Recovery Policy"), and that Section 9 of Article II and this Section 11 of Article III shall be deemed superseded by and subject to the terms and conditions of the Compensation Recovery Policy from and after the effective date thereof.

[SIGNATURES ON NEXT PAGE]

The undersigned Grantee hereby accepts the awards covered by this Performance-Based Restricted Stock Units Agreement on the terms and conditions set forth herein.

Dated: ____

Grantee

Executed in the name of and on behalf of the Corporation at Mayfield Heights, Ohio as of this ____ day of _____ 2018.

MATERION CORPORATION

By ____

Christopher E. Eberhardt

Vice President, Tax & Treasury

Statement of Management Objectives

This Statement of Management Objectives applies to the performance-based Restricted Stock Units granted to the Grantee on the Date of Grant and applies with respect to the Performance-Based Restricted Stock Units Agreement between the Company and the Grantee (the "**Agreement**"). Capitalized terms used in the Agreement that are not specifically defined in this Statement of Management Objectives have the meanings assigned to them in the Agreement or in the Plan, as applicable.

Section 1. Definitions. For purposes hereof:

- (a) "**Peer Group**" means, of a benchmark group of 21 entities, the names of which are attached hereto as Annex A, those entities that remain in the Peer Group as of the end of the Performance Period after application of the Peer

Group Adjustment Protocol.

- (b) “**Peer Group Adjustment Protocol**” means: (i) if an entity listed in Annex A files for bankruptcy and/or liquidation, is operating under bankruptcy protection, or is delisted from its primary stock exchange because it fails to meet the exchange listing requirement, then such entity will remain in the Peer Group, but RTSR for the Performance Period will be calculated as if such entity achieved Total Shareholder Return placing it at the bottom (chronologically, if more than one such entity) of the Peer Group; (ii) if, by the last day of the Performance Period, an entity listed in Annex A has been acquired and/or is no longer existing as a public company that is traded on its primary stock exchange (other than for the reasons as described in subsection (i) above), then such entity will not remain in the Peer Group and RTSR for the Performance Period will be calculated as if such entity had never been a member of the Peer Group; and (iii) except as otherwise described in subsection (i) and (ii) above, for purposes of this Statement of Management Objectives, for each of the entities listed in Annex A, such entity shall be deemed to include any successor to all or substantially all of the primary business of such entity at end of the Performance Period.
- (c) “**Relative Total Shareholder Return**” or “**RTSR**” means the percentile rank of the Corporation’s Total Shareholder Return among the Total Shareholder Returns of all members of the Peer Group, ranked in descending order, at the end of the Performance Period. Percentile will be calculated using the Microsoft Excel Percentile Function method.
- (d) “**Return on Invested Capital**” or “**ROIC**” means the Corporation’s annual adjusted operating profit before tax divided by the sum of short-term debt, long-term debt and equity. “Equity” excludes the items within other comprehensive income (namely, pension valuation adjustment, derivative valuation adjustment and the cumulative translation adjustment). The measurement of the 2020 ROIC will be the average ROIC for 2018, 2019, and 2020 using the beginning (December 31 of the previous year) and ending (December 31 of the current year) invested capital.
- (e) “**Total Shareholder Return**” means, with respect to each of the Common Shares and the common stock of each of the members of the Peer Group, a rate of return reflecting stock price appreciation, plus the reinvestment of dividends in additional shares of stock, from the beginning of the Performance Period through the end of the Performance Period. For purposes of calculating Total Shareholder Return for each of the Company and the members of the Peer Group, the beginning stock price will be based on the average closing stock price for the 30 calendar days immediately preceding January 1, 2018 on the principal stock exchange on which the stock then traded and the ending stock price will be based on the average closing stock price for the 30 calendar days immediately preceding January 1, 2021 on the principal stock exchange on which the stock then trades.

Section 2. Performance Matrices.

From 0% to 200% of the ROIC PRSUs will be earned based on achievement of the portion of the Management Objectives measured by ROIC goals during the Performance Period, and from 0% to 200% of the RTSR PRSUs will be earned based on achievement of the portion of the Management Objectives measured by RTSR goals during the Performance Period, in each case as follows:

Performance Level	Return on Invested Capital	ROIC PRSUs Earned
Below Threshold	Below 8.0%	0%
Threshold	8.0%	50%
Target	8.5%	100%
Maximum	10.0% or greater	200%

Performance Level	Relative Total Shareholder Return	RTSR PRSUs Earned
Below Threshold	Ranked below 25th percentile	0%
Threshold	Ranked at 25th percentile	50%
Target	Ranked at 50th percentile	100%

Maximum	Ranked at or above 80th percentile	200%
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Section 3. Number of PRSUs Earned. Following the Performance Period, on the Committee Determination Date, the Committee shall determine whether and to what extent the goals relating to the Management Objectives have been satisfied for the Performance Period and shall determine the number of PRSUs that shall become nonforfeitable hereunder and under the Agreement on the basis of the following:

- (a) Below Threshold. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period falls below the threshold level, as set forth in the Performance Matrices, no ROIC PRSUs shall become nonforfeitable and (ii) RTSR for the Performance Period falls below the threshold level, as set forth in the Performance Matrices, no RTSR PRSUs shall become nonforfeitable.
- (b) Threshold. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period equals the threshold level, as set forth in the Performance Matrices, 50% of the ROIC PRSUs (rounded down to the nearest whole number of ROIC PRSUs) shall become nonforfeitable, and (ii) RTSR for the Performance Period equals the threshold level, as set forth in the Performance Matrices, 50% of the RTSR PRSUs (rounded down to the nearest whole number of RTSR PRSUs) shall become nonforfeitable.
- (c) Between Threshold and Target. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period exceeds the threshold level, but is less than the target level, as set forth in the Performance Matrices, a percentage between 50% and 100% (determined on the basis of straight-line mathematical interpolation) of the ROIC PRSUs (rounded down to the nearest whole number of ROIC PRSUs) shall become nonforfeitable, and (ii) RTSR for the Performance Period exceeds the threshold level, but is less than the target level, as set forth in the Performance Matrices, a percentage between 50% and 100% (determined on the basis of straight-line mathematical interpolation) of the RTSR PRSUs (rounded down to the nearest whole number of RTSR PRSUs) shall become nonforfeitable.
- (d) Target. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period equals the target level, as set forth in the Performance Matrices, 100% of the ROIC PRSUs shall become nonforfeitable, and (ii) RTSR for the Performance Period equals the target level, as set forth in the Performance Matrices, 100% of the RTSR PRSUs shall become nonforfeitable.
- (e) Between Target and Maximum. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period exceeds the target level, but is less than the maximum level, as set forth in the Performance Matrices, a percentage between 100% and 200% (determined on the basis of straight-line mathematical interpolation) of the ROIC PRSUs (rounded down to the nearest whole number of ROIC PRSUs) shall become nonforfeitable, and (ii) RTSR for the Performance Period exceeds the target level, but is less than the maximum level, as set forth in the Performance Matrices, a percentage between 100% and 200% (determined on the basis of straight-line mathematical interpolation) of the RTSR PRSUs (rounded down to the nearest whole number of RTSR PRSUs) shall become nonforfeitable.
- (f) Equals or Exceeds Maximum. If, upon the conclusion of the Performance Period, (i) ROIC for the Performance Period equals or exceeds the maximum level, as set forth in the Performance Matrices, 200% of the ROIC PRSUs shall become nonforfeitable, and (ii) RTSR for the Performance Period equals or exceeds the maximum level, as set forth in the Performance Matrices, 200% of the RTSR PRSUs shall become nonforfeitable.

Annex A

2018 Peer Group

Company Name	Ticker Symbol
II-VI Incorporated	IIVI
Cabot Corporation	CBT

Calgon Carbon Corporation	CCC
Carpenter Technology Corporation	CRS
Coherent, Inc.	COHR
CTS Corporation	CTS
Entegris, Inc.	ENTG
Ferro Corporation	FOE
Haynes International, Inc.	HAYN
Innophos Holdings, Inc.	IPHS
Integrated Device Technology, Inc.	IDTI
Kemet Corporation	KEM
Kraton Performance Polymers, Inc.	KRA
Minerals Technologies Inc.	MTX
Olympic Steel Inc.	ZEUS
PolyOne Corporation	POL
Quaker Chemical Corporation	KWR
Rayonier Advanced Materials, Inc.	RYAM
Rogers Corporation	ROG
Schweitzer-Mauduit International, Inc.	SWM
Suncoke Energy, Inc.	SXC

EXHIBIT A

MATERION CORPORATION

BENEFICIARY DESIGNATIONS

In accordance with the terms and conditions of the Materion Corporation 2006 Stock Incentive Plan (As Amended and Restated as of May 3, 2017) (the “Plan”), I hereby designate the person(s) indicated below as my beneficiary(ies) to receive any amounts payable under said Plan after my death.

Name

Address

Social Sec. Nos. of Beneficiary(ies) __

Relationship(s) __

Date(s) of Birth __

In the event that the above-named beneficiary(ies) predecease(s) me, I hereby designate the following person as beneficiary(ies);

Name

Address

Social Sec. Nos. of Beneficiary(ies) ____

Relationship(s) ____

Date(s) of Birth ____

I hereby expressly revoke all prior designations of beneficiary(ies), reserve the right to change the beneficiary(ies) herein designated and agree that the rights of said beneficiary(ies) shall be subject to the terms of the Plan. In the event that there is no beneficiary living at the time of my death, I understand that the amounts payable under the Plan will be paid to my estate

Date (Signature)

(Print or type name

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.

Dated: April 26, 2018

/s/ Jugal K. Vijayvargiya

Jugal K. Vijayvargiya

President and Chief Executive Officer

CERTIFICATIONS

I, Joseph P. Kelley, 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.

Dated: April 26, 2018

/s/ Joseph P. Kelley

Joseph P. Kelley

Vice President, Finance and Chief Financial Officer

**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 March 30, 2018 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: April 26, 2018

/s/ Jugal K. Vijayvargiya

Jugal K. Vijayvargiya

President and Chief Executive Officer

/s/ Joseph P. Kelley

Joseph P. Kelley

Vice President, Finance and Chief Financial Officer

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 March 30, 2018**

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 March 30, 2018 (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