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

FORM 10-Q

(Mark One)

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

For the quarterly period ended June 30, 2019

OR

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

For the transition period from __________ to __________

Commission file number 1-10258

Tredegar Corporation
(Exact Name of Registrant as Specified in Its Charter)

Virginia	**54-1497771**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
1100 Boulders Parkway Richmond, Virginia	**23225**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's Telephone Number, Including Area Code: (804) 330-1000

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common stock, no par value	TG	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes x No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes x 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	x	Smaller reporting company	☐
Non-accelerated filer	☐			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 x

The number of shares of Common Stock, no par value, outstanding as of August 2, 2019: 33,353,082

PART I - FINANCIAL INFORMATION

Item 1. Financial Statements.

Tredegar Corporation
Consolidated Balance Sheets
(In Thousands, Except Share Data)
(Unaudited)

	June 30, 2019	December 31, 2018
Assets		
Current assets:		
Cash and cash equivalents	$ 34,660	$ 34,397
Restricted cash	5,109	—
Accounts and other receivables, net of allowance for doubtful accounts and sales returns of $3,206 in 2019 and $2,937 in 2018	116,370	124,727
Income taxes recoverable	2,923	6,783
Inventories	93,359	93,810
Prepaid expenses and other	8,501	9,564
Total current assets	260,922	269,281
Property, plant and equipment, at cost	795,045	793,072
Less accumulated depreciation	(559,330)	(564,703)
Net property, plant and equipment	235,715	228,369
Right-of-use leased assets	19,610	—
Investment in kaléo (cost basis of $7,500)	91,200	84,600
Identifiable intangible assets, net	34,530	36,295
Goodwill	81,404	81,404
Deferred income taxes	1,343	3,412
Other assets	5,376	4,012
Total assets	$ 730,100	$ 707,373
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable	$ 106,871	$ 112,758
Accrued expenses	46,479	42,495
Lease liability, short-term	2,650	—
Total current liabilities	156,000	155,253
Lease liability, long-term	18,526	—
Long-term debt	73,000	101,500
Pension and other postretirement benefit obligations, net	83,965	88,124
Deferred income taxes	4,402	—
Other noncurrent liabilities	5,931	7,639
Total liabilities	341,824	352,516
Shareholders' equity:		
Common stock, no par value (issued and outstanding - 33,353,082 shares at June 30, 2019 and 33,176,024 shares at December 31, 2018)	41,227	38,892
Common stock held in trust for savings restoration plan (73,853 shares at June 30, 2019 and 72,883 shares at December 31, 2018)	(1,575)	(1,559)
Accumulated other comprehensive income (loss):		
Foreign currency translation adjustment	(97,223)	(96,940)
Gain (loss) on derivative financial instruments	(1,333)	(1,601)
Pension and other post-retirement benefit adjustments	(77,289)	(81,446)
Retained earnings	524,469	497,511
Total shareholders' equity	388,276	354,857
Total liabilities and shareholders' equity	$ 730,100	$ 707,373

See accompanying notes to financial statements.

Tredegar Corporation
Consolidated Statements of Income
(In Thousands, Except Per Share Data)
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2019	2018	2019	2018
Revenues and other items:				
Sales	$ 248,248	$ 263,759	$ 496,714	$ 522,470
Other income (expense), net	7,096	5,857	24,206	14,089
	255,344	269,616	520,920	536,559
Costs and expenses:				
Cost of goods sold	192,581	210,667	393,235	413,856
Freight	8,887	8,440	17,907	17,229
Selling, general and administrative	23,864	20,946	45,875	42,775
Research and development	5,451	4,646	9,936	8,957
Amortization of identifiable intangibles	890	1,025	1,782	2,054
Pension and postretirement benefits	2,416	2,578	4,831	5,156
Interest expense	1,263	1,577	2,495	3,221
Asset impairments and costs associated with exit and disposal activities, net of adjustments	1,075	468	2,131	590
Total	236,427	250,347	478,192	493,838
Income before income taxes	18,917	19,269	42,728	42,721
Income taxes	4,440	4,547	8,467	9,834
Net income	$ 14,477	$ 14,722	$ 34,261	$ 32,887
Earnings per share:				
Basic	$ 0.44	$ 0.45	$ 1.03	$ 1.00
Diluted	$ 0.44	$ 0.44	$ 1.03	$ 1.00
Shares used to compute earnings per share:				
Basic	33,270	33,074	33,197	33,028
Diluted	33,278	33,108	33,203	33,048
Dividends per share	$ 0.11	$ 0.11	$ 0.22	$ 0.22

See accompanying notes to financial statements.

Tredegar Corporation
Consolidated Statements of Comprehensive Income (Loss)
(In Thousands)
(Unaudited)

	Three Months Ended June 30,	
	2019	2018
Net income	$ 14,477	$ 14,722
Other comprehensive income (loss):		
Unrealized foreign currency translation adjustment (net of tax of $0 in 2019 and tax of $0 in 2018)	507	(10,811)
Derivative financial instruments adjustment (net of tax benefit of $134 in 2019 and tax of $164 in 2018)	621	(905)
Amortization of prior service costs and net gains or losses (net of tax of $593 in 2019 and tax of $761 in 2018)	2,079	2,611
Other comprehensive income (loss)	3,207	(9,105)
Comprehensive income (loss)	$ 17,684	$ 5,617

	Six Months Ended June 30,	
	2019	2018
Net income	$ 34,261	$ 32,887
Other comprehensive income (loss):		
Unrealized foreign currency translation adjustment (net of tax of $0 in 2019 and tax benefit of $0 in 2018)	(283)	(8,905)
Derivative financial instruments adjustment (net of tax benefit of $51 in 2019 and tax of $20 in 2018)	268	(1,190)
Amortization of prior service costs and net gains or losses (net of tax of $1,185 in 2019 and tax of $1,523 in 2018)	4,158	5,223
Other comprehensive income (loss)	4,143	(4,872)
Comprehensive income (loss)	$ 38,404	$ 28,015

See accompanying notes to financial statements.

Tredegar Corporation
Consolidated Statements of Cash Flows
(In Thousands)
(Unaudited)

	Six Months Ended June 30,	
	2019	2018
Cash flows from operating activities:		
Net income	$ 34,261	$ 32,887
Adjustments for noncash items:		
Depreciation	14,465	14,688
Amortization of identifiable intangibles	1,782	2,054
Amortization of right-of-use lease asset	1,270	—
Deferred income taxes	5,339	8,996
Accrued pension and post-retirement benefits	4,831	5,156
(Gain)/loss on investment in kaléo accounted for under the fair value method	(6,600)	(14,000)
(Gain)/loss on asset impairments and divestitures	522	—
Net (gain)/loss on disposal of assets	(11)	(109)
Changes in assets and liabilities, net of effects of acquisitions and divestitures:		
Accounts and other receivables	8,471	(15,205)
Inventories	702	(810)
Income taxes recoverable/payable	3,860	26,277
Prepaid expenses and other	1,081	(2,057)
Accounts payable and accrued expenses	(566)	13,879
Lease liability	(1,306)	—
Pension and postretirement benefit plan contributions	(3,648)	(2,912)
Other, net	4,043	2,926
Net cash provided by operating activities	68,496	71,770
Cash flows from investing activities:		
Capital expenditures	(24,251)	(14,528)
Return of escrowed funds relating to acquisition earn-out	—	4,250
Proceeds from the sale of assets and other	22	1,095
Net cash used in investing activities	(24,229)	(9,183)
Cash flows from financing activities:		
Borrowings	30,000	28,000
Debt principal payments	(58,500)	(57,000)
Dividends paid	(7,320)	(7,293)
Debt financing costs	(1,757)	—
Proceeds from exercise of stock options and other	(854)	926
Net cash used in financing activities	(38,431)	(35,367)
Effect of exchange rate changes on cash	(464)	(1,390)
Increase in cash, cash equivalents and restricted cash	5,372	25,830
Cash, cash equivalents and restricted cash at beginning of period	34,397	36,491
Cash, cash equivalents and restricted cash at end of period	$ 39,769	$ 62,321

See accompanying notes to financial statements.

Tredegar Corporation
Consolidated Statement of Shareholders' Equity
(In Thousands, Except Share and Per Share Data)
(Unaudited)

The following summarizes the changes in shareholders' equity for the six month period ended June 30, 2019:

				Accumulated Other Comprehensive Income (Loss)			
	Common Stock	Retained Earnings	Trust for Savings Restoration Plan	Foreign Currency Translation	Gain (Loss) on Derivative Financial Instruments	Pension & Other Post-retirement Benefit Adjustment	Total Shareholders' Equity
Balance at January 1, 2019	$ 38,892	$ 497,511	$ (1,559)	$ (96,940)	$ (1,601)	$ (81,446)	$ 354,857
Net income	—	34,261	—	—	—	—	34,261
Other comprehensive income (loss):							
Foreign currency translation adjustment (net of tax of $0)	—	—	—	(283)	—	—	(283)
Derivative financial instruments adjustment (net of tax benefit of $51)	—	—	—	—	268	—	268
Amortization of prior service costs and net gains or losses (net of tax of $1,185)	—	—	—	—	—	4,158	4,158
Cash dividends declared ($0.22 per share)	—	(7,320)	—	—	—	—	(7,320)
Stock-based compensation expense	3,189	—	—	—	—	—	3,189
Issued upon exercise of stock options & other	(854)	—	—	—	—	—	(854)
Tredegar common stock purchased by trust for savings restoration plan	—	16	(16)	—	—	—	—
Balance at June 30, 2019	$ 41,227	$ 524,468	$ (1,575)	$ (97,223)	$ (1,333)	$ (77,288)	$ 388,276

The following summarizes the changes in shareholders’ equity for the six month period ended June 30, 2018:

				Accumulated Other Comprehensive Income (Loss)			
	Common Stock	Retained Earnings	Trust for Savings Restoration Plan	Foreign Currency Translation	Gain (Loss) on Derivative Financial Instruments	Pension & Other Post-retirement Benefit Adjustment	Total Shareholders’ Equity
Balance at January 1, 2018	$ 34,747	$ 487,230	$ (1,528)	$ (86,178)	$ 459	$ (90,950)	$ 343,780
Net income	—	32,887	—	—	—	—	32,887
Other comprehensive income (loss):							
Foreign currency translation adjustment (net of tax of $0)	—	—	—	(8,905)	—	—	(8,905)
Derivative financial instruments adjustment (net of tax of $20)	—	—	—	—	(1,190)	—	(1,190)
Amortization of prior service costs and net gains or losses (net of tax of $1,523)	—	—	—	—	—	5,223	5,223
Cash dividends declared ($0.22 per share)	—	(7,293)	—	—	—	—	(7,293)
Stock-based compensation expense	1,981	—	—	—	—	—	1,981
Issued upon exercise of stock options & other	926	—	—	—	—	—	926
Tredegar common stock purchased by trust for savings restoration plan	—	16	(16)	—	—	—	—
Balance at June 30, 2018	$ 37,654	$ 512,840	$ (1,544)	$ (95,083)	$ (731)	$ (85,727)	$ 367,409

See accompanying notes to financial statements.

1 BASIS OF PRESENTATION

In the opinion of management, the accompanying consolidated financial statements of Tredegar Corporation and its subsidiaries ("Tredegar," "the Company," "we," "us" or "our") contain all adjustments necessary to state fairly, in all material respects, Tredegar's consolidated financial position as of June 30, 2019, the consolidated results of operations for the three and six months ended June 30, 2019 and 2018, the consolidated cash flows for the six months ended June 30, 2019 and 2018, and the consolidated changes in shareholders' equity for the six months ended June 30, 2019 and 2018, in accordance with U.S. generally accepted accounting principles ("GAAP"). All such adjustments, unless otherwise detailed in the notes to the consolidated interim financial statements, are deemed to be of a normal, recurring nature.

The Company operates on a calendar fiscal year except for the Aluminum Extrusions segment, which operates on a 52/53-week fiscal year basis. As such, the fiscal second quarter for 2019 and 2018 for this segment references 13-week periods ended June 30, 2019 and June 24, 2018, respectively. The Company does not believe the impact of reporting the results of this segment as stated above is material to the consolidated financial results.

The financial position data as of December 31, 2018 that is included herein was derived from the audited consolidated financial statements provided in the Company's Annual Report on Form 10-K for the year ended December 31, 2018 ("2018 Form 10-K") but does not include all disclosures required by GAAP. These financial statements should be read in conjunction with the consolidated financial statements and related notes included in the 2018 Form 10-K. The results of operations for the three and six months ended June 30, 2019, are not necessarily indicative of the results to be expected for the full year. Certain prior year balances have been reclassified to conform with current year presentation.

Cash, Cash Equivalents and Restricted Cash

The following table provides a reconciliation of cash, cash equivalents and restricted cash to amounts shown in the consolidated statements of cash flows:

(In thousands)	June 30, 2019	December 31, 2018
Cash and cash equivalents	$ 34,660	$ 34,397
Restricted cash	5,109	—
Total cash, cash equivalents and restricted cash	$ 39,769	$ 34,397

Restricted cash as of June 30, 2019 consists of a deposit received in the second quarter of 2019 for the sale of the PE Films idle manufacturing facility in Shanghai, China, which sale closed in the third quarter of 2019. An amount offsetting the deposit is recorded as a current liability in accrued expenses. Chinese government regulations limit the use of these funds to the purposes of the liquidating entity until the completion of the liquidation process, which the Company expects to be concluded within the next twelve months.

2 REVENUE RECOGNITION

As of June 30, 2019 and December 31, 2018, accounts receivable and other receivables, net, were $116.4 million and $124.7 million, respectively, made up of the following:

(In thousands)		June 30, 2019		December 31, 2018
Customer receivables	$	115,522	$	122,182
Other accounts and notes receivable		4,054		5,482
Total accounts and other receivables		119,576		127,664
Less: Allowance for bad debts and sales returns		(3,206)		(2,937)
Total accounts and other receivables, net	$	116,370	$	124,727

For the three and six months ended June 30, 2019, the Company had no material bad-debt expense and there were no material contract assets, contract liabilities or deferred contract costs recorded on the consolidated balance sheets as of June 30, 2019. Payment terms start from the date of satisfaction of the performance obligation and vary from COD (cash on delivery) to 120 days. The Company's contracts generally include one performance obligation, which is satisfied at a point in time.

For the three and six months ended June 30, 2019, revenue recognized from performance obligations related to prior periods (for example, changes in transaction price), was not material.

Revenue expected to be recognized in any future period related to remaining performance obligations, excluding i) revenue pertaining to contracts that have an original expected duration of one year or less, ii) contracts where revenue is recognized as invoiced and iii) variable consideration related to unsatisfied performance obligations, is not expected to materially impact the Company's financial results.

3 GAINS AND LOSSES ASSOCIATED WITH PLANT SHUTDOWNS, ASSET IMPAIRMENTS AND RESTRUCTURINGS, SALES OF ASSETS AND OTHER ITEMS

Plant shutdowns, asset impairments, restructurings, sales of assets and other items are shown in the net sales and operating profit by segment table in Note 11 and are also included in "Asset impairments and costs associated with exit and disposal activities, net of adjustments" in the consolidated statements of income, unless otherwise noted below.

Plant shutdowns, asset impairments, restructurings and other items in the second quarter of 2019 include:

- Pretax charges of $2.0 million for professional fees associated with remediation activities and other costs relating to the Company's material weaknesses in internal control over financial reporting, business development activities, and implementation of new accounting guidance (included in "Selling, general and administrative expenses" in the consolidated statements of income);
- Pretax charges of $1.0 million associated with the consolidation of certain PE Films manufacturing activities in the U.S. and Europe for its Personal Care business component, including the eventual shutdown of the facility in Lake Zurich, Illinois and the transfer of its production of elastics materials to the new elastics production lines in Terre Haute, Indiana. The pretax charges are comprised of severance and other employee-related accrued costs of $0.4 million ($0.3 million for Lake Zurich), asset impairments of $0.3 million ($0.2 million for Lake Zurich) and accelerated depreciation of $0.3 million for Lake Zurich (included in "Cost of goods sold" in the consolidated statements of income);
- Pretax charges of $0.1 million for severance and other employee-related costs associated with other restructuring activities in PE Films;
- Pretax charges of $0.2 million related to estimated excess costs associated with the ramp-up of new product offerings and additional expenses related to strategic capacity expansion projects by PE Films (included in "Cost of goods sold" in the consolidated statements of income); and
- Pretax charges of $0.3 million associated with the shutdown of PE Films' manufacturing facility in Shanghai, China, which consists of other facility-related costs.

Plant shutdowns, asset impairments, restructurings and other items in the first six months of 2019 include:

- Pretax charges of $2.9 million for professional fees associated with remediation activities and other costs relating to the Company's material weaknesses in internal control over financial reporting, business development activities, and implementation of new accounting guidance (included in "Selling, general and administrative expenses" in the consolidated statements of income);

- Pretax charges of $1.0 million associated with the consolidation of certain PE Films manufacturing activities in the U.S. and Europe for its Personal Care business component, including the eventual shutdown of the facility in Lake Zurich, Illinois and the transfer of its production of elastics materials to the new elastics production lines in Terre Haute, Indiana. The pretax charges are comprised of severance and other employee-related accrued costs of $0.4 million ($0.3 million for Lake Zurich), asset impairments of $0.3 million ($0.2 million for Lake Zurich) and accelerated depreciation of $0.3 million for Lake Zurich (included in "Cost of goods sold" in the consolidated statements of income);
- Pretax charges of $0.4 million for the write-off of a Personal Care production line at PE Films' Guangzhou, China facility;
- Pretax charges of $0.5 million for severance and other employee-related costs associated with restructurings in PE Films;
- Pretax charges of $0.4 million related to estimated excess costs associated with the ramp-up of new product offerings and additional expenses related to strategic capacity expansion projects by PE Films (included in "Cost of goods sold" in the consolidated statements of income); and
- Pretax charges of $0.5 million associated with the shutdown of PE Films' manufacturing facility in Shanghai, China, which consists of other facility-related costs.

Plant shutdowns, asset impairments, restructurings and other items in the second quarter of 2018 include:

- Pretax charges of $0.6 million related to estimated excess costs associated with the ramp-up of new product offerings and additional expenses related to strategic capacity expansion projects by PE Films (included in "Cost of goods sold" in the consolidated statements of income); and
- Pretax charges of $0.7 million associated with the shutdown of PE Films' manufacturing facility in Shanghai, China, which consists of severance and other employee-related accrued costs of $0.4 million, accelerated depreciation of $0.1 million (included in "Cost of goods sold" in the consolidated statements of income) and other facility consolidation-related expenses of $0.2 million.

Plant shutdowns, asset impairments, restructurings and other items in the first six months of 2018 include:

- Pretax charges of $1.5 million related to estimated excess costs associated with the ramp-up of new product offerings and additional expenses related to strategic capacity expansion projects by PE Films (included in "Cost of goods sold" in the consolidated statements of income);
- Pretax charges of $0.3 million for professional fees associated with the Terphane Limitada worthless stock deduction, the impairment of assets of Flexible Packaging Films and determining the effect of the new U.S. federal income tax law (included in "Selling, general and administrative expenses" in the consolidated statements of income); and
- Pretax charges of $0.7 million associated with the shutdown of PE Films' manufacturing facility in Shanghai, China, which consists of severance and other employee-related accrued costs of $0.4 million, accelerated depreciation of 0.1 million (included in "Cost of goods sold" in the consolidated statements of income) and other facility consolidation-related expenses of $0.2 million.

Results on the Company's investment in kaléo, Inc. ("kaléo"), which is accounted for under the fair value method, in the second quarter and first six months of 2019 included gains of $7.1 million ($5.6 million after taxes) and $24.2 million ($19.9 million after taxes), which included a $17.6 million dividend, respectively, compared to gains of $5.8 million ($4.5 million after taxes) and $14.0 million ($10.9 million after taxes) in the second quarter and first six months of 2018, respectively (included in "Other income (expense), net" in the consolidated statements of income). See Note 7 for additional information on investments.

The Company plans to close its PE Films manufacturing facility in Lake Zurich, Illinois, which produces elastic materials. Production at the Lake Zurich plant is expected to cease during the fourth quarter of 2019 with product transfers to the new elastic production line at Terre Haute, Indiana. As a result of this plant closure, the Company expects to recognize pre-tax cash costs of $7.6 million associated with these activities comprised of (i) customer-related costs ($0.7 million), (ii) severance and other employee related costs ($1.8 million), and (iii) asset disposal and other cash costs ($5.1 million). In addition, the Company expects non-cash asset write-offs and accelerated depreciation of $1.6 million. Proceeds from the expected sale of Lake Zurich's real property are estimated at approximately $5 million. The Company anticipates that these activities will be completed by the end of 2020.

The Company plans to consolidate the production of certain PE Films personal care products in Europe over the next twelve months. As a result of this consolidation, the Company expects to recognize pre-tax cash costs of $1.7 million, primarily for severance and customer-related costs.

In June 2018, the Company announced plans to close its facility in Shanghai, China, which primarily produced plastic films used as components for personal care products ("Shanghai transition"). Production ceased at this plant during the fourth quarter of 2018. Total expenses associated with the Shanghai transition are $3.8 million since project inception. Cash expenditures were $0.3 million and $0.5 million in the three and six months ended June 30, 2019, respectively, and $3.0 million since project inception. An additional $0.5 million of cash expenditures is expected to be needed to complete the project, primarily for severance and other employee related costs. Proceeds from the sale of the plant facilities, which occurred in the third quarter of 2019, are expected to be $6.5 million, net of related expenses.

A reconciliation of the beginning and ending balances of accrued expenses associated with exit and disposal activities and charges associated with asset impairments and reported as "Asset impairments and costs associated with exit and disposal activities, net of adjustments" in the consolidated statements of income for the six months ended June 30, 2019 is as follows:

(In thousands)	Severance [a]	Asset Impairments	Other [b]	Total
Balance at January 1, 2019	$ 616	$ —	$ 160	$ 776
Changes in 2019:				
Charges	968	695	468	2,131
Cash payments	(677)	—	(523)	(1,200)
Charges against assets	—	(695)	—	(695)
Reversed to income	—	—	—	—
Balance at June 30, 2019	$ 907	$ —	$ 105	$ 1,012

(a) Severance cash spent primarily includes severance payments associated with PE Films' exit and disposal activities.
(b) Other primarily includes other restructuring costs associated with the Shanghai plant shutdown.

4 INVENTORIES

The components of inventories are as follows:

(In thousands)		June 30, 2019		December 31, 2018
Finished goods	$	28,755	$	24,938
Work-in-process		14,957		15,648
Raw materials		29,745		33,741
Stores, supplies and other		19,902		19,483
Total	$	93,359	$	93,810

5 EARNINGS PER SHARE

Basic earnings per share is computed by dividing net income by the weighted average number of shares of common stock outstanding. Diluted earnings per share is computed by dividing net income by the weighted average common and potentially dilutive common equivalent shares outstanding, determined as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
(In thousands)	2019	2018	2019	2018
Weighted average shares outstanding used to compute basic earnings per share	33,270	33,074	33,197	33,028
Incremental dilutive shares attributable to stock options and restricted stock	8	34	6	20
Shares used to compute diluted earnings per share	33,278	33,108	33,203	33,048

Incremental shares attributable to stock options and restricted stock are computed under the treasury stock method using the average market price during the related period. For the three and six months ended June 30, 2019, average out-of-the-money options to purchase shares that were excluded from the calculation of incremental shares attributable to stock options and restricted stock were 1,474,762 and 1,225,333, respectively. For the three and six months ended June 30, 2018, average out-of-the-money options to purchase shares that were excluded from the calculation of incremental shares attributable to stock options and restricted stock were 215,903 and 264,868, respectively.

6 ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The following table summarizes the after-tax changes in accumulated other comprehensive income (loss) for the six months ended June 30, 2019:

(In thousands)		Foreign currency translation adjustment		Gain (loss) on derivative financial instruments		Pension and other post-retirement benefit adjustments		Total
Beginning balance, January 1, 2019	$	(96,940)	$	(1,601)	$	(81,446)	$	(179,987)
Other comprehensive income (loss) before reclassifications		(283)		(1,218)		—		(1,501)
Amounts reclassified from accumulated other comprehensive income (loss)		—		1,486		4,158		5,644
Net other comprehensive income (loss) - current period		(283)		268		4,158		4,143
Ending balance, June 30, 2019	$	(97,223)	$	(1,333)	$	(77,288)	$	(175,844)

The following table summarizes the after-tax changes in accumulated other comprehensive income (loss) for the six months ended June 30, 2018:

(In Thousands)	Foreign currency translation adjustment	Gain (loss) on derivative financial instruments	Pension and other post-retirement benefit adjustments	Total
Beginning balance, January 1, 2018	$ (86,178)	$ 459	$ (90,950)	$ (176,669)
Other comprehensive income (loss) before reclassifications	(8,905)	(829)	—	(9,734)
Amounts reclassified from accumulated other comprehensive income (loss)	—	(361)	5,223	4,862
Net other comprehensive income (loss) - current period	(8,905)	(1,190)	5,223	(4,872)
Ending balance, June 30, 2018	$ (95,083)	$ (731)	$ (85,727)	$ (181,541)

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income (loss) for the three months ended June 30, 2019 are summarized as follows:

(In Thousands)		Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income (loss) to net income (loss)
Gain (loss) on derivative financial instruments:			
Aluminum future contracts, before taxes	$	(606)	Cost of sales
Foreign currency forward contracts, before taxes		(369)	Selling, general & administrative
Foreign currency forward contracts, before taxes		16	Cost of sales
Total, before taxes		(959)	
Income tax expense (benefit)		(131)	Income taxes
Total, net of tax	$	(828)	
Amortization of pension and other post-retirement benefits:			
Actuarial gain (loss) and prior service costs, before taxes	$	(2,672)	(a)
Income tax expense (benefit)		(593)	Income taxes
Total, net of tax	$	(2,079)	

(a)This component of accumulated other comprehensive income (loss) is included in the computation of net periodic pension cost (see Note 9 for additional detail).

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income (loss) for the six months ended June 30, 2019 are summarized as follows:

(In thousands)		Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income (loss) to net income (loss)
Gain (loss) on derivative financial instruments:			
Aluminum future contracts, before taxes	$	(1,223)	Cost of sales
Foreign currency forward contracts, before taxes		(560)	Selling, general & administrative
Foreign currency forward contracts, before taxes		31	Cost of sales
Total, before taxes		(1,752)	
Income tax expense (benefit)		(266)	Income taxes
Total, net of tax	$	(1,486)	
Amortization of pension and other post-retirement benefits:			
Actuarial gain (loss) and prior service costs, before taxes	$	(5,343)	(a)
Income tax expense (benefit)		(1,185)	Income taxes
Total, net of tax	$	(4,158)	

(a)This component of accumulated other comprehensive income (loss) is included in the computation of net periodic pension cost (see Note 9 for additional detail).

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income for the three months ended June 30, 2018 are summarized as follows:

(In Thousands)		Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income (loss) to net income (loss)
Gain (loss) on derivative financial instruments:			
Aluminum future contracts, before taxes	$	712	Cost of sales
Foreign currency forward contracts, before taxes		(378)	Selling, general & administrative
Foreign currency forward contracts, before taxes		16	Cost of sales
Total, before taxes		350	
Income tax expense (benefit)		142	Income taxes
Total, net of tax	$	208	
Amortization of pension and other post-retirement benefits:			
Actuarial gain (loss) and prior service costs, before taxes	$	(3,372)	(a)
Income tax expense (benefit)		(761)	Income taxes
Total, net of tax	$	(2,611)	

(a) This component of accumulated other comprehensive income (loss) is included in the computation of net periodic pension cost (see Note 9 for additional detail).

Reclassifications of balances out of accumulated other comprehensive income (loss) into net income for the six months ended June 30, 2018 are summarized as follows:

(In thousands)		Amount reclassified from other comprehensive income (loss)	Location of gain (loss) reclassified from accumulated other comprehensive income to net income
Gain (loss) on derivative financial instruments:			
Aluminum future contracts, before taxes	$	944	Cost of sales
Foreign currency forward contracts, before taxes		(419)	Selling, general & adminstrative
Foreign currency forward contracts, before taxes		31	Cost of sales
Total, before taxes		556	
Income tax expense (benefit)		195	Income taxes
Total, net of tax	$	361	
Amortization of pension and other post-retirement benefits:			
Actuarial gain (loss) and prior service costs, before taxes	$	(6,746)	(a)
Income tax expense (benefit)		(1,523)	Income taxes
Total, net of tax	$	(5,223)	

(a) This component of accumulated other comprehensive income (loss) is included in the computation of net periodic pension cost (see Note 9 for additional detail).

7 INVESTMENTS

In August 2007 and December 2008, the Company made an aggregate investment of $7.5 million in kaléo, a privately held specialty pharmaceutical company dedicated to building innovative solutions for serious and life-threatening medical conditions. Tredegar owns Series A-3 Preferred Stock and Series B Preferred Stock in kaléo that, taken together, represents on a fully-diluted basis an approximate 20% interest in kaléo. Tredegar accounts for its investment in kaléo under the fair value option. At the time of the initial investment, the Company elected the fair value option of accounting since its investment objectives were similar to those of venture capitalists, which typically do not have controlling financial interests.

The estimated fair value of the Company's investment was $91.2 million as of June 30, 2019 and $84.6 million as of December 31, 2018. The Company recognized a dividend from and net appreciation on its investment in kaléo of $7.1 million ($5.6 million after taxes) and $24.2 million ($19.9 million after taxes) in the second quarter and first six months of 2019, respectively, including a $17.6 million cash dividend declared by kaléo on March 29, 2019 and paid on April 30, 2019. Future dividends are subject to the discretion of kaléo's board of directors. Amounts recognized associated with the Company's investment in kaléo are included in "Other income (expense), net" in the consolidated statements of income and separately stated in the segment operating profit table in Note 11.

The Company estimates the fair value of its investment in kaléo by: (i) computing the weighted average estimated enterprise value ("EV") utilizing both the discounted cash flow method (the "DCF Method") and the application of a market multiple to earnings before interest, taxes, depreciation and amortization (the "EBITDA Multiple Method"), (ii) applying adjustments for any surplus or deficient working capital and estimates of contingent liabilities, (iii) adding cash and cash equivalents, (iv) subtracting interest-bearing debt, (v) subtracting a private company liquidity discount estimated at 15% of the net result of (i) through (iv), and (vi) applying liquidation preferences and fully diluted ownership percentages to the estimated equity value computed in (i) through (v).

The Company's estimate of kaléo's EV as of June 30, 2019 was determined by weighting the EBITDA Multiple Method by 80% and the DCF Method by 20%, which was consistent with the weighting applied at December 31, 2018. The heavier weighting towards the EBITDA Multiple Method was due to its heuristic nature versus the hypothetical nature of the projections used in the DCF Method. The DCF Method projections rely on numerous assumptions and Level 3 inputs, including estimating market growth, market share, pricing, net margins (after allowances for temporary discounts, prompt pay discounts, product returns, wholesaler fees, chargebacks, rebates and copays), selling expenses, R&D expenses, general and administrative expenses, income taxes on unlevered pretax income, working capital, capital expenditures and the risk-adjusted discount rate. In addition, there are various regulatory and legal enforcement efforts, including an ongoing Department of Justice investigation related to kaléo's Evzio business, which could have a material adverse effect on kaléo's business that require assessment in any valuation method applied.

The table below provides a sensitivity analysis of the estimated fair value at June 30, 2019, of the Company's investment in kaléo for changes in the EBITDA multiple used in applying the EBITDA Multiple Method and the changes in the weighting of the DCF Method.

($ Millions)		EV-to-Adjusted EBITDA Multiple				
		5.1 x	6.1 x	7.1 x	8.1 x	9.1 x
Weighting to DCF Method	50%	$ 75.4	$ 83.3	$ 91.2	$ 99.1	$ 107.0
	40%	$ 72.3	$ 81.7	$ 91.2	$ 100.7	$ 110.2
	30%	$ 69.1	$ 80.1	$ 91.2	$ 102.3	$ 113.3
	20%	$ 65.9	$ 78.6	$ 91.2	$ 103.8	$ 116.5
	10%	$ 62.7	$ 77.0	$ 91.2	$ 105.4	$ 119.6
	0%	$ 59.6	$ 75.4	$ 91.2	$ 107.0	$ 122.8

The ultimate value of the Company's ownership interest in kaléo will be determined and realized only if and when a liquidity event occurs, and the ultimate value could be materially different from the $91.2 million estimated fair value reflected in the Company's financial statements at June 30, 2019.

8 DERIVATIVE FINANCIAL INSTRUMENTS

Tredegar uses derivative financial instruments for the purpose of hedging margin exposure from fixed-price forward sales contracts in Aluminum Extrusions and exposure from currency volatility that exist as part of ongoing business operations (primarily in Flexible Packaging Films). These derivative financial instruments are designated as and qualify as cash flow hedges and are recognized in the consolidated balance sheet at fair value. The fair value of derivative instruments recorded on the consolidated balance sheets are based upon Level 2 inputs. If individual derivative instruments with the same counterparty can be settled on a net basis, the Company records the corresponding derivative fair values as a net asset or net liability.

In the normal course of business, Aluminum Extrusions enters into fixed-price forward sales contracts with certain customers for the future sale of fixed quantities of aluminum extrusions at scheduled intervals. In order to hedge margin exposure created from the fixing of future sales prices relative to volatile raw material (aluminum) costs, Aluminum Extrusions enters into a combination of forward purchase commitments and futures contracts to acquire or hedge aluminum, based on the scheduled purchases for the firm sales commitments. The fixed-price firm sales commitments and related hedging instruments generally have durations of not more than 12 months, and the notional amount of aluminum futures contracts that hedged future purchases of aluminum to meet fixed-price forward sales contract obligations was $19.8 million (18.0 million pounds of aluminum) at June 30, 2019 and $25.4 million (22.5 million pounds of aluminum) at December 31, 2018.

The table below summarizes the location and gross amounts of aluminum futures contract fair values (Level 2) in the consolidated balance sheets as of June 30, 2019 and December 31, 2018:

	June 30, 2019		December 31, 2018	
(In thousands)	Balance Sheet Account	Fair Value	Balance Sheet Account	Fair Value
Derivatives Designated as Hedging Instruments				
Asset derivatives:				
Aluminum futures contracts	Accrued expenses	$ —	Accrued expenses	$ 20
Liability derivatives:				
Aluminum futures contracts	Accrued expenses	(1,845)	Accrued expenses	$ (1,650)
Net asset (liability)		$ (1,845)		$ (1,630)

In the event that a counterparty to an aluminum fixed-price forward sales contract chooses not to take delivery of its aluminum extrusions, the customer is contractually obligated to compensate Aluminum Extrusions for any losses on the related aluminum futures and/or forward contracts through the date of cancellation.

The table below summarizes the location and gross amounts of foreign currency forward contract fair values (Level 2) in the consolidated balance sheets as of June 30, 2019 and December 31, 2018:

	June 30, 2019		December 31, 2018	
(In Thousands)	Balance Sheet Account	Fair Value	Balance Sheet Account	Fair Value
Derivatives Designated as Hedging Instruments				
Asset derivatives:				
Foreign currency forward contracts	Prepaid expenses and other	$ 198	Prepaid expenses and other	$ 37
Liability derivatives:				
Foreign currency forward contracts	Accrued expenses	(651)	Accrued expenses	(1,090)
Net asset (liability)		$ (453)		$ (1,053)

The Company's earnings are exposed to foreign currency exchange risk primarily through the translation of the financial statements of subsidiaries that have a functional currency other than the U.S. Dollar. The Company estimates that the net mismatch translation exposure between Flexible Packaging Films business unit in Brazil, Terphane Ltda.'s ("Terphane Ltda.") U.S. Dollar quoted or priced sales and underlying Brazilian Real ("R$") quoted or priced operating costs (excluding depreciation and amortization) is annual net costs of R$125 million. Terphane Ltda. has the following outstanding foreign exchange average forward rate contracts to purchase Brazilian Real and sell U.S. Dollars:

USD Notional Amount (000s)	Average Forward Rate Contracted on USD/BRL	R$ Equivalent Amount (000s)	Applicable Month	Estimated % of Terphane Ltda. R$ Operating Cost Exposure Hedged
$1,800	3.8826	R$6,989	Jul-19	65%
$1,800	3.8950	R$7,011	Aug-19	68%
$1,800	3.9070	R$7,033	Sep-19	66%
$1,800	3.9203	R$7,056	Oct-19	67%
$1,800	3.9331	R$7,080	Nov-19	67%
$1,800	3.9455	R$7,102	Dec-19	73%
$1,400	3.8256	R$5,356	Jan-20	51%
$1,400	3.8331	R$5,366	Feb-20	52%
$1,400	3.8377	R$5,373	Mar-20	49%
$1,400	3.8456	R$5,384	Apr-20	50%
$1,400	3.8539	R$5,395	May-20	51%
$1,400	3.8621	R$5,407	Jun-20	50%
$1,400	3.8727	R$5,422	Jul-20	48%
$1,400	3.8850	R$5,439	Aug-20	50%
$1,400	3.8964	R$5,455	Sep-20	49%
$1,400	3.9079	R$5,471	Oct-20	50%
$1,400	3.9187	R$5,486	Nov-20	50%
$1,400	3.9306	R$5,503	Dec-20	54%
$27,600	3.8887	R$107,328		56%

These foreign currency exchange contracts have been designated and qualify as cash flow hedges of Terphane Ltda.'s forecasted sales to customers quoted or priced in U.S. Dollars over that period. By changing the currency risk associated with these U.S. Dollar sales, the derivatives have the effect of offsetting operating costs quoted or priced in Brazilian Real and decreasing the net exposure to Brazilian Real in the consolidated statements of income. The net fair value of the open forward contracts was a negative $0.5 million as of June 30, 2019.

These derivative contracts involve elements of market risk that are not reflected on the consolidated balance sheet, including the risk of dealing with counterparties and their ability to meet the terms of the contracts. The counterparties to any forward purchase commitments are major aluminum brokers and suppliers, and the counterparties to any aluminum futures contracts are major financial institutions. Fixed-price forward sales contracts are only made available to the best and most credit-worthy customers. The counterparties to the Company's foreign currency cash flow hedge contracts are major financial institutions.

The pretax effect on net income (loss) and other comprehensive income (loss) of derivative instruments classified as cash flow hedges and described in the previous paragraphs for the three and six month periods ended June 30, 2019 and 2018 is summarized in the table below:

(In thousands)	Cash Flow Derivative Hedges					
	Three Months Ended June 30,					
	Aluminum Futures Contracts		Foreign Currency Forwards			
	2019	2018	2019	2019	2018	2018
Amount of pretax gain (loss) recognized in other comprehensive income (loss)	$ (1,192)	$ 1,457	$ —	$ 719	$ —	(1,849)
Location of gain (loss) reclassified from accumulated other comprehensive income (loss) into net income (effective portion)	Cost of sales	Cost of sales	Cost of sales	Selling, general & admin	Cost of sales	Selling, general & admin
Amount of pretax gain (loss) reclassified from accumulated other comprehensive income (loss) to net income effective portion)	$ (606)	$ 712	$ 16	$ (369)	$ 16	(378)
	Six Months Ended June 30,					
	Aluminum Futures Contracts		Foreign Currency Forwards			
	2019	2018	2019	2019	2018	2018
Amount of pre-tax gain (loss) recognized in other comprehensive income (loss)	$ (1,438)	$ 1,065	$ —	$ (97)	$ —	(1,679)
Location of gain (loss) reclassified from accumulated other comprehensive income (loss) into net income (effective portion)	Cost of sales	Cost of sales	Cost of sales	Selling, general & admin	Cost of sales	Selling, general & admin
Amount of pre-tax gain (loss) reclassified from accumulated other comprehensive income (loss) to net income (effective portion)	$ (1,223)	$ 944	$ 31	$ (560)	$ 31	(419)

As of June 30, 2019, the Company expects $1.3 million of unrealized after-tax losses on derivative instruments reported in accumulated other comprehensive income (loss) to be reclassified to earnings within the next 12 months. For the three and six month periods ended June 30, 2019 and 2018, net gains or losses realized, from previously unrealized net gains or losses on hedges that had been discontinued, were not material.

9 PENSION AND OTHER POSTRETIREMENT BENEFITS

Tredegar sponsors a noncontributory defined benefit (pension) plan covering certain current and former U.S. employees. The plan for salaried and hourly employees currently in effect is based on a formula using the participant's years of service and compensation or using the participant's years of service and a dollar amount. The plan is closed to new participants and pay for active plan participants for benefit calculations was frozen as of December 31, 2007. As of January 31, 2018, the plan no longer accrued benefits associated with crediting employees for service, thereby freezing all future benefits under the plan.

The components of net periodic benefit cost for the pension and other postretirement benefit programs reflected in the consolidated statements of income are shown below:

	Pension Benefits		Other PostRetirement Benefits	
	Three Months Ended June 30,		Three Months Ended June 30,	
(In thousands)	2019	2018	2019	2018
Service cost	$ —	$ 5	$ 8	$ 10
Interest cost	3,068	2,882	73	69
Expected return on plan assets	(3,404)	(3,761)	—	—
Amortization of prior service costs, (gains) losses and net transition asset	2,730	3,428	(57)	(54)
Net periodic benefit cost	$ 2,394	$ 2,554	$ 24	$ 25
	Pension Benefits		**Other Post-Retirement Benefits**	
	Six Months Ended June 30,		**Six Months Ended June 30,**	
	2019	**2018**	**2019**	**2018**
Service cost	$ —	$ 10	$ 16	$ 20
Interest cost	6,135	5,764	146	138
Expected return on plan assets	(6,808)	(7,522)	—	—
Amortization of prior service costs, (gains) losses and net transition asset	5,459	6,856	(115)	(108)
Net periodic benefit cost	$ 4,786	$ 5,108	$ 47	$ 50

Pension and other postretirement liabilities were $84.6 million and $88.8 million at June 30, 2019 and December 31, 2018, respectively ($0.6 million included in "Accrued expenses" at June 30, 2019 and December 31, 2018, with the remainder included in "Pension and other postretirement benefit obligations, net" in the consolidated balance sheets). The Company's required contributions are expected to be $8.1 million in 2019. Contributions to the pension plan during the first six months of 2019 were $3.6 million. Tredegar funds its other postretirement benefits (life insurance and health benefits) on a claims-made basis; for 2019, the Company anticipates the amount will be consistent with amounts paid for the year ended December 31, 2018, or $0.3 million.

10 OTHER INCOME (EXPENSE), NET

Other income (expense), net consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
(In thousands)	2019	2018	2019	2018
Gain on investment in kaléo accounted for under fair value method	$ 7,100	$ 5,800	$ 24,182	$ 14,000
Other	(4)	57	24	89
Total	$ 7,096	$ 5,857	$ 24,206	$ 14,089

The gain on investment in kaléo accounted for under fair value method shown above for the six months ended June 30, 2019, includes a cash dividend of $17.6 million from kaléo. See Note 7 for more details on the investment in kaléo.

11 BUSINESS SEGMENTS

The Company's business segments are PE Films, Flexible Packaging Films and Aluminum Extrusions. Information by business segment is reported below. There are no accounting transactions between segments and no allocations to segments. Net sales (sales less freight) and operating profit from ongoing operations are the measures of sales and operating profit used by the chief operating decision maker for purposes of assessing performance.

The following table presents net sales and operating profit by segment for the three and six months ended June 30, 2019 and 2018:

	Three Months Ended June 30,		Six Months Ended June 30,	
(In thousands)	2019	2018	2019	2018
Net Sales				
PE Films	$ 69,161	$ 82,457	$ 135,941	$ 175,707
Flexible Packaging Films	33,443	28,304	67,062	56,741
Aluminum Extrusions	136,757	144,558	275,804	272,793
Total net sales	239,361	255,319	478,807	505,241
Add back freight	8,887	8,440	17,907	17,229
Sales as shown in the Consolidated Statements of Income	$ 248,248	$ 263,759	$ 496,714	$ 522,470
Operating Profit (Loss)				
PE Films:				
Ongoing operations	$ 7,766	$ 8,678	$ 10,717	$ 22,712
Plant shutdowns, asset impairments, restructurings and other	(1,523)	(1,135)	(2,901)	(2,187)
Flexible Packaging Films:				
Ongoing operations	2,517	1,294	5,377	3,008
Plant shutdowns, asset impairments, restructurings and other	—	—	—	—
Aluminum Extrusions:				
Ongoing operations	14,518	13,156	26,603	23,355
Plant shutdowns, asset impairments, restructurings and other	(17)	(46)	(57)	(99)
Total	23,261	21,947	39,739	46,789
Interest income	48	228	107	284
Interest expense	1,263	1,577	2,495	3,221
Gain (loss) on investment in kaléo accounted for under fair value method	7,100	5,800	24,182	14,000
Stock option-based compensation costs	898	305	1,313	391
Corporate expenses, net	9,331	6,824	17,492	14,740
Income (loss) before income taxes	18,917	19,269	42,728	42,721
Income taxes (benefit)	4,440	4,547	8,467	9,834
Net income (loss)	$ 14,477	$ 14,722	$ 34,261	$ 32,887

The following table presents identifiable assets by segment at June 30, 2019 and December 31, 2018:

(In thousands)	June 30, 2019	December 31, 2018
PE Films	$ 232,316	$ 231,720
Flexible Packaging Films	63,826	58,964
Aluminum Extrusions	288,715	281,372
Subtotal	584,857	572,056
General corporate	105,474	100,920
Cash, cash equivalents and restricted cash	39,769	34,397
Total	$ 730,100	$ 707,373

The following tables disaggregate the Company's revenue by geographic area and product group for the three and six months ended June 30, 2019 and 2018:

Net Sales by Geographic Area (a)				
	Three Months Ended June 30,		Six Months Ended June 30,	
(In thousands)	2019	2018	2019	2018
United States	$ 162,788	$ 171,185	$ 335,042	$ 330,747
Exports from the United States to:				
Asia	24,513	18,884	38,006	42,476
Canada	5,872	14,239	9,477	27,537
Europe	1,517	1,697	2,877	3,519
Latin America	2,670	3,654	5,537	6,706
Operations outside the United States:				
Brazil	27,582	23,659	55,721	46,811
The Netherlands	8,450	11,394	18,037	23,322
Hungary	5,162	8,519	11,996	17,337
China	—	1,692	230	3,966
India	807	396	1,884	2,820
Total	$ 239,361	$ 255,319	$ 478,807	$ 505,241

Net Sales by Product Group				
	Three Months Ended June 30,		Six Months Ended June 30,	
(In thousands)	2019	2018	2019	2018
PE Films:				
Personal care materials	37,956	55,985	82,812	117,629
Surface protection films	29,253	24,918	49,142	54,733
LED lighting products & other films	1,952	1,555	3,987	3,345
Subtotal	69,161	82,458	135,941	175,707
Flexible Packaging Films	33,443	28,304	67,062	56,741
Aluminum Extrusions:				
Nonresidential building & construction	69,019	72,442	138,657	137,629
Consumer durables	16,381	17,161	31,926	32,309
Distribution	8,739	12,031	17,312	22,961
Automotive	12,496	11,157	25,123	20,787
Residential building & construction	10,278	12,343	21,950	21,813
Machinery & equipment	9,471	9,867	19,394	19,144
Electrical	10,373	9,556	21,442	18,150
Subtotal	136,757	144,557	275,804	272,793
Total	239,361	255,319	478,807	505,241

See the previous page for a reconciliation of net sales to sales (as shown in the consolidated statements of income).

(a) Export sales relate primarily to PE Films. Operations outside the U.S. in The Netherlands, Hungary, China and India also relate to PE Films. Operations in Brazil are primarily related to Flexible Packaging Films, but also include PE Films operations. Sales from locations in The Netherlands and Hungary are primarily to customers located in Europe. Sales from locations in China (Guangzhou and Shanghai) are primarily to customers located in China, but also include other customers in Asia.

12 INCOME TAXES

Tredegar recorded tax expense of $8.5 million on pretax net income of $42.7 million in the first six months of 2019. Therefore, the effective tax rate in the first six months of 2019 was 19.8%, compared to 23.0% in the first six months of 2018. The quarterly effective tax rate is an estimate based on a proration of the components of the Company's estimated annual effective tax rate and discrete items recorded during the first six months of the year. The significant differences between the U.S. federal statutory rate and the effective income tax rate for the six months ended June 30, 2019 and 2018 are as follows:

(In thousands, except percentages)	2019		2018	
Six Months Ended June 30,	Amount	%	Amount	%
Income tax expense at federal statutory rate	$ 8,972	21.0	$ 8,971	21.0
U.S. Tax on Foreign Branch Income	1,808	5.0	736	1.7
Foreign rate differences	1,191	3.3	669	1.6
State taxes, net of federal income tax benefit	468	1.1	537	1.2
Non-deductible expenses	217	0.6	123	0.3
Changes in estimates related to prior year tax provision	152	0.4	(34)	(0.1)
Valuation allowance for capital loss carry-forwards	—	—	91	0.2
Stock-based compensation	(141)	(0.4)	176	0.4
Tax contingency accruals and tax settlements	(154)	(0.4)	100	0.2
Research and development tax credit	(255)	(0.7)	(188)	(0.4)
Foreign Derived Intangible Income (FDII)	(445)	(1.2)	(309)	(0.7)
Tax impact of dividend received	(919)	(2.2)	—	—
Foreign tax incentives	(1,074)	(3.0)	(655)	(1.5)
Valuation allowance due to foreign losses and impairments	(1,353)	(3.7)	(383)	(0.9)
Effective income tax rate	$ 8,467	19.8	$ 9,834	23.0

Tredegar accrues U.S. federal income taxes on unremitted earnings of all foreign subsidiaries where required. However, due to changes in the taxation of dividends under the U.S. Tax Cuts and Jobs Act of 2017, Tredegar will only record U.S. federal income taxes on unremitted earnings of its foreign subsidiaries where Tredegar cannot take steps to eliminate any potential tax on future distributions from its foreign subsidiaries.

The Brazilian federal statutory income tax rate is a composite of 34.0% (25.0% of income tax and 9.0% of social contribution on income). Terphane Ltda.'s manufacturing facility in Brazil is the beneficiary of certain income tax incentives that allow for a reduction in the statutory Brazilian federal income tax rate to 15.25% levied on the operating profit on certain of its products. The incentives have been granted for a 10-year period, from the commencement date of January 1, 2015. The benefit from the tax incentives was $1.1 million and $0.7 million in the first six months of 2019 and 2018, respectively.

Tredegar and its subsidiaries file income tax returns in the U.S., various states, and jurisdictions outside the U.S. With exceptions for some U.S. states and non-U.S. jurisdictions, Tredegar and its subsidiaries are no longer subject to U.S. federal, state or non-U.S. income tax examinations by tax authorities for years before 2014.

The Company includes tax-related interest and penalties in income tax expense. As of June 30, 2019, $0.2 million of interest and penalties are accrued as a tax liability. During the first half of 2019, a minimal amount of net interest income was recorded.

13 NEW ACCOUNTING PRONOUNCEMENTS

New accounting pronouncements adopted in 2019:

ASU 2016-02, LEASES (TOPIC 842)

In February 2016, the Financial Accounting Standards Board ("FASB") issued a revised standard on lease accounting. Lessees will need to recognize virtually all of their leases with a term longer than 12 months on the balance sheet, by recording a right-of-use ("ROU") asset and lease liability. The revised standard requires additional analysis of the components of a transaction to determine if a right-of-use asset is embedded in the transaction that needs to be treated as a lease. Substantial additional disclosures are also required by the revised standard. The revised standard is effective for the Company for fiscal years beginning after December 31, 2018, including the interim periods within those fiscal years. A modified retrospective transition approach which requires a cumulative-effect adjustment to the opening balance of retained earnings on the effective date is required for leases existing at, or entered into after, the effective date, with certain practical expedients available. The Company elected to use certain transition practical expedients that allow it to elect to not reassess: i) whether expired or existing contracts contain leases under the new definition of a lease; ii) lease classification for expired or existing leases; and iii) whether previously capitalized initial direct costs would qualify for capitalization under Topic 842. The Company adopted the new guidance in the first quarter of 2019, electing the modified retrospective transition approach. The adoption did not have a material effect on the Company's consolidated financial statements. The most significant impact of the new standard was the recognition of new ROU assets of approximately $21 million and lease liabilities of approximately $22 million for real estate, office equipment and vehicle operating leases.

ASU 2017-12, DERIVATIVES AND HEDGING (TOPIC 815)

In August 2017, the FASB issued amended guidance on the accounting for hedging activities. The amended guidance makes more hedging strategies qualify for hedge accounting. After initial qualification, the amended guidance permits a qualitative effectiveness assessment for certain hedges instead of a quantitative test, if the company can reasonably support an expectation of effectiveness throughout the term of the hedge. The amended guidance is effective for annual and interim periods beginning after January 1, 2019, but may be adopted immediately. The Company adopted the amended guidance in the first quarter of 2019 and there was no impact from adoption on the Company's consolidated financial statements.

ASU 2018-2, REPORTING COMPREHENSIVE INCOME (TOPIC 220)

In February 2018, the FASB issued ASU 2018-2 to provide entities an option to reclassify certain "stranded tax effects" resulting from the recent U.S. tax reform from accumulated other comprehensive income (AOCI) to retained earnings. This new standard takes effect for all entities in fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Company has elected to not reclassify the income tax effects resulting from tax reform from AOCI to retained earnings.

Accounting Standards Not Yet Implemented:

ASU 2016-13, FINANCIAL INSTRUMENTS - CREDIT LOSSES (TOPIC 326)

In June 2016, the FASB issued ASU 2016-13 related to the measurement of credit losses on financial instruments. The pronouncement replaces the incurred loss methodology to record credit losses with a methodology that reflects the expected credit losses for financial assets not accounted for at fair value with gains and losses recognized through net income. This standard is effective for fiscal years beginning after December 15, 2019 and interim periods therein, with early adoption permitted for fiscal years, and interim periods therein, beginning after December 15, 2018. The Company is in the process of evaluating the guidance and expects to adopt ASU 2016-13 in the first quarter of 2020, with no material impact on the Company's consolidated financial statements.

ASU 2018-13, FAIR VALUE MEASUREMENT (TOPIC 820)

In August 2018, the FASB issued ASU 2018-13, which amended the fair value measurement guidance by removing and modifying certain disclosure requirements, while also adding new disclosure requirements. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements and the narrative description of measurement uncertainty should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. The amendments are effective for all companies for fiscal years, and interim periods within those years, beginning after December 15, 2019. Early adoption is permitted for all amendments. Further, a company may elect to early adopt the removal or modification of disclosures immediately and delay adoption of the new disclosure requirements until the effective date. The Company plans to adopt all disclosure requirements in the first quarter of 2020, with no material impact on the Company's consolidated financial statements.

14 LEASES

Tredegar has various lease agreements with terms up to 12 years, including leases of real estate, office equipment and vehicles. Some leases include options to purchase, terminate or extend for one or more years. These options are included in the lease term when it is reasonably certain that the option will be exercised.

At inception, the Company determines if an arrangement contains a lease and whether that lease meets the classification criteria of a finance or operating lease. The Company has elected to not record short-term leases with an original lease term of one year or less in the consolidated balance sheet. To the extent such leases contain renewal options that the Company intends to exercise, the related ROU asset and lease liability are included in the consolidated balance sheet. Some of the Company's lease arrangements contain lease components (e.g. minimum rent payments) and non-lease components (e.g. maintenance, labor charges, etc.). The Company generally accounts for the lease and non-lease components as a single lease component.

Certain of the Company's lease agreements include rental payments that are adjusted periodically for an index or rate. The leases are initially measured using the projected payments adjusted for the index or rate in effect at the commencement date. The Company's lease agreements do not contain any material residual value guarantees or material restrictive covenants.

Operating Leases

Operating leases are included in "Right-of-use lease assets", "Lease liabilities - short-term" and "Lease liabilities - long-term" on the consolidated balance sheets. These assets and liabilities are recognized at the commencement date based on the present value of remaining lease payments over the lease term using the Company's secured incremental borrowing rates, adjusted for term and geographic location using country-based swap rates. From reviewing the lease contracts in the implementation effort, the Company found no instance where it could readily determine the rate implicit in the lease.

Lease expense for operating leases is recognized on a straight-line basis over the lease term. Variable lease expense is recognized in the period in which the obligation for those payments is incurred. Depending upon the specific use of the ROU asset, lease expense is included in the "Cost of goods sold", "Freight", "Selling, general and administrative", and "Research and development" line items on the consolidated statements of income. Lease income is not material to the results of operations for the three and six months ended June 30, 2019.

The following table presents information about the amount, timing and uncertainty of cash flows arising from the Company's operating leases as of June 30, 2019.

(In thousands)	As of June 30, 2019
Maturity of Lease Liabilities	Future Lease Payments
2019 (remaining)	1,747
2020	3,507
2021	3,397
2022	2,484
2023	2,378
Thereafter	12,288
Total undiscounted operating lease payments	25,801
Less: Imputed interest	4,625
Present value of operating lease liabilities	21,176
Balance Sheet Classification	
Lease liabilities, short-term	2,650
Lease liabilities, long-term	18,526
Total operating lease liabilities	21,176
Other Information:	
Weighted-average remaining lease term for operating leases	9 Years
Weighted-average discount rate for operating leases	4.34%

Rental expense was $5.2 million in 2018. Rental commitments under all noncancellable leases as of December 31, 2018, were as follows:

(In thousands)		
2019	$	4,445
2020		4,007
2021		3,591
2022		2,391
2023		1,245
Remainder		2,630
Total minimum lease payments	$	18,309

Cash Flows

An initial right-of-use asset of $21 million was recognized as a non-cash asset addition and an initial lease liability of $22 million was recognized as a non-cash liability addition with the adoption of the new lease accounting standard.

Operating Lease Costs

Operating lease costs were $1.5 million and $2.9 million in the second quarter and first six months of 2019, respectively. These costs are primarily related to long-term operating leases, but also include amounts for variable leases and short-term leases.

15 DEBT

On June 28, 2019, Tredegar entered into a $500 million five-year, secured revolving credit agreement (“Credit Agreement”), with an option to increase that amount by $100 million. The Credit Agreement amends and restates the Company’s previous $400 million five-year, secured revolving credit agreement that was due to expire on March 1, 2021.

Borrowings under the Credit Agreement bear an interest rate of LIBOR plus a credit spread and commitment fees charged on the unused amount under the Credit Agreement at various indebtedness-to-adjusted EBITDA levels as follows:

Pricing Under Credit Revolving Agreement (Basis Points)		
Indebtedness-to-Adjusted EBITDA Ratio	Credit Spread Over LIBOR	Commitment Fee
> 3.5x but <= 4.0x	200.0	40
> 3.0x but <= 3.5x	187.5	35
> 2.0x but <= 3.0x	175.0	30
> 1.0x but <= 2.0x	162.5	25
<= 1.0x	150.0	20

At June 30, 2019, the interest cost on debt borrowed under the Credit Agreement was priced at one-month LIBOR plus the applicable credit spread of 162.5 basis points.

The most restrictive covenants in the Credit Agreement include:

- Maximum indebtedness-to-adjusted EBITDA (“Leverage Ratio”) of 4.00x;
- Minimum adjusted EBITDA-to-interest expense of 3.00x; and
- Maximum aggregate distributions to shareholders over the term of the Credit Agreement of $130 million plus, beginning with the fiscal quarter ended June 30, 2019, 50% of net income and, at a Leverage Ratio of equal to or greater than 3.00x, a limitation on such payments for the succeeding quarter at the greater of (i) $4.75 million and (ii) 50% of consolidated net income for the most recent fiscal quarter.

The Credit Agreement is secured by substantially all of the Company’s and its domestic subsidiaries’ assets, including equity in certain material first-tier foreign subsidiaries. As of June 30, 2019, Tredegar was in compliance with all financial covenants in the Credit Agreement.

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

Forward-looking and Cautionary Statements

Some of the information contained in this Quarterly Report on Form 10-Q ("Form 10-Q") may constitute "forward-looking statements" within the meaning of the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995. When using the words "believe," "estimate," "anticipate," "expect," "project," "plan," "likely," "may" and similar expressions, Tredegar does so to identify forward-looking statements. Such statements are based on then current expectations and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those addressed in the forward-looking statements. It is possible that actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in or implied by these forward-looking statements. Accordingly, you should not place undue reliance on these forward-looking statements. Factors that could cause actual results to differ from expectations include, without limitation, the following:

- loss or gain of sales to significant customers on which our business is highly dependent;
- inability to achieve sales to new customers to replace lost business;
- inability to develop, efficiently manufacture and deliver new products at competitive prices;
- failure of our customers to achieve success or maintain market share;
- failure to protect our intellectual property rights;
- risks of doing business in countries outside the U.S. that affect our substantial international operations;
- political, economic, and regulatory factors concerning our products;
- uncertain economic conditions in countries in which we do business;
- competition from other manufacturers, including manufacturers in lower-cost countries and manufacturers benefiting from government subsidies;
- impact of fluctuations in foreign exchange rates;
- a change in the amount of our underfunded defined benefit (pension) plan liability;
- an increase in the operating costs incurred by our operating companies, including, for example, the cost of raw materials and energy;
- inability to successfully identify, complete or integrate strategic acquisitions; failure to realize the expected benefits of such acquisitions; and assumption of unanticipated risks in such acquisitions;
- disruption to our manufacturing facilities;
- an information technology system failure or breach;
- volatility and uncertainty of the valuation of our investment in kaléo;
- the impact of the imposition of tariffs and sanctions on imported aluminum ingot used in our aluminum extrusions;
- the impact of new tariffs or duties imposed as a result of rising trade tensions between the U.S. and other countries;
- failure to establish and maintain effective internal control over financial reporting;
- the termination of anti-dumping duties on products imported to Brazil that compete with products produced by Flexible Packaging;

and the other factors discussed in the reports Tredegar files with or furnishes to the Securities and Exchange Commission (the "SEC") from time to time, including the risks and important factors set forth in additional detail in Part I, Item 1A of Tredegar's 2018 Annual Report on Form 10-K (the "2018 Form 10-K"). Readers are urged to review and consider carefully the disclosures Tredegar makes in its filings with the SEC, including the 2018 Form 10-K.

Tredegar does not undertake, and expressly disclaims any duty, to update any forward-looking statement to reflect any change in management's expectations or any change in conditions, assumptions or circumstances on which such statements are based, except as required by applicable law.

References herein to "Tredegar," "the Company," "we," "us" and "our" are to Tredegar Corporation and its subsidiaries, collectively, unless the context otherwise indicates or requires.

Unless otherwise stated or indicated, all comparisons are to the prior year period.

Executive Summary

Tredegar is a manufacturer of polyethylene plastic films through its PE Films segment, polyester films through its Flexible Packaging Films segment and aluminum extrusions through its Aluminum Extrusions segment. PE Films is composed of surface protection films, personal care materials, polyethylene overwrap films and films for other markets. Flexible Packaging Films produces polyester-based films for use in packaging applications that have specialized properties, such as heat resistance, strength, barrier protection and the ability to accept high-quality print graphics. Aluminum Extrusions produces high-quality, soft-alloy and medium-strength aluminum extrusions primarily for building and construction, automotive, and specialty, which consists of consumer durables, machinery and equipment, electrical and distribution end-use products.

Second quarter 2019 net income was $14.5 million ($0.44 per share) compared with net income of $14.7 million ($0.44 per share) in the second quarter of 2018. Net income for the second quarter of 2019 had an after-tax gain on the Company's investment in Kaleo, Inc. ("kaléo") of $5.6 million ($0.17 per share), which is accounted for under the fair value method (see Note 7 for more details). Other losses related to plant shutdowns, asset impairments, restructurings and other items are described in Note 3. Net sales (sales less freight) and operating profit from ongoing operations are the measures of sales and operating profit used by the chief operating decision maker of each segment for purposes of assessing performance. See the table in Note 11 for a presentation of Tredegar's net sales and operating profit by segment for the three and six months ended June 30, 2019 and 2018.

PE Films

A summary of operating results from ongoing operations for PE Films is provided below:

(In thousands, Except Percentages)	Three Months Ended June 30, 2019	Three Months Ended June 30, 2018	Favorable/ (Unfavorable) % Change	Six Months Ended June 30, 2019	Six Months Ended June 30, 2018	Favorable/ (Unfavorable) % Change
Sales volume (lbs)	25,476	30,099	(15.4)%	51,322	64,922	(20.9)%
Net sales	$ 69,161	$ 82,457	(16.1)%	$ 135,941	$ 175,707	(22.6)%
Operating profit from ongoing operations	$ 7,766	$ 8,678	(10.5)%	$ 10,717	$ 22,712	(52.8)%

Second Quarter 2019 Results vs. Second Quarter 2018 Results

Net sales (sales less freight) in the second quarter of 2019 decreased by $13.3 million versus 2018 primarily due to lower sales in Personal Care. Surface Protection sales increased $4.3 million while Personal Care sales decreased $18.0 million.

Net sales in Surface Protection increased in the second quarter of 2019 versus the second quarter of 2018 due to higher selling prices and quality claims in 2018 that did not recur in 2019. As discussed further below, a possible customer product transition in Surface Protection continues to be delayed. Net sales decreased in Personal Care as a result of lower volume in most product categories from competitive pressures ($13 million), including a large portion associated with the previously disclosed customer product transition discussed below. In addition, net sales were adversely impacted by mix, the timing in the passthrough of changes in resin prices and the decline in the value of currencies for operations outside of the U.S. relative to the U.S. Dollar.

Operating profit from ongoing operations in the second quarter of 2019 decreased by $0.9 million versus the second quarter of 2018 primarily due to:

- Higher contribution to profits from Surface Protection primarily due to higher selling prices slightly offset by mix (net favorable impact of $2.1 million), quality claims in 2018 that did not recur in 2019 ($1.3 million) and improved operating efficiencies ($1.9 million);
- Lower contribution to profits from Personal Care primarily due to lower volume ($5.5 million), unfavorable mix ($1.8 million), the unfavorable timing in the passthrough of changes in resin prices ($0.4 million) and an unfavorable foreign exchange impact ($0.4 million), partially offset by efficiencies primarily from lower fixed manufacturing and selling, general and administrative costs ($1.6 million); and
- A favorable variance in other components of PE Films of $0.3 million.

Customer Product Transitions in Surface Protection and Personal Care

The Surface Protection component of PE Films supports manufacturers of optical and other specialty substrates used in flat panel display products. These films are primarily used by customers to protect components of displays in the manufacturing and transportation process and then discarded.

The Company previously reported the risk that a portion of its film products used in surface protection applications could be made obsolete by possible future customer product transitions to less costly alternative processes or materials. These transitions principally relate to one customer. The Company previously believed the transitions could possibly be fully implemented by the fourth quarter of 2019; however, these transitions continue to encounter delays resulting in higher than expected volumes which contributed to record operating profit for Surface Protection during the second quarter of 2019. If fully implemented, the Company estimates that the annualized adverse impact on future operating profit from this customer shift versus the performance during the last four quarters ended June 30, 2019, would be approximately $14 million. To offset the potential adverse impact, the Company is aggressively pursuing and making progress on new surface protection products, applications, markets and customers.

During October 2018, the Personal Care component of PE Films completed negotiations with its customer regarding a previously disclosed significant product transition. The total annual sales that will be adversely impacted by this product transition is approximately $70 million. During 2019, the Company expects sales for the product of $30 to $35 million with the potential for no sales thereafter.

Personal Care had operating profit from ongoing operations plus depreciation and amortization of $3.1 million in the fourth quarter of 2018 and negative $0.5 million in the first half of 2019, and expects negative $1.0 million in the second half of 2019. Competitive pressures have led Personal Care to miss its sales and margin goals so far in 2019. Management continues to focus on new business development and cost reduction initiatives.

First Six Months 2019 Results vs. First Six Months 2018 Results

Net sales (sales less freight) in the first six months of 2019 decreased by $40 million versus 2018 primarily due to lower sales in Surface Protection and Personal Care of $5.6 million and $34.8 million, respectively. The decline in sales in Surface Protection occurred in the first quarter of 2019 which the Company believes was the result of customer inventory builds in previous periods. The decline in sales in Personal Care was primarily due to lower volume in most product categories from competitive pressures ($26 million), including a large portion associated with the previously disclosed customer product transition. In addition, net sales were adversely impacted by mix, the timing in the passthrough of changes in resin prices and the decline in the value of currencies for operations outside of the U.S. relative to the U.S. Dollar.

Operating profit from ongoing operations in the first six months of 2019 decreased by $12.0 million versus 2018 primarily due to:

- Lower contribution to profits from Surface Protection, primarily due to lower volume and mix ($8.1 million) and higher research and development spending ($0.8 million), partially offset by higher selling prices ($4.6 million), quality claims in 2018 that did not recur in 2019 ($1.3 million), manufacturing efficiencies ($1.2 million), favorable raw material costs ($0.7 million), and lower selling, general and administrative costs ($0.3 million);
- Lower contribution to profits from Personal Care primarily due to lower volume ($10.6 million) and unfavorable mix ($3.1 million), partially offset by efficiencies primarily from lower fixed manufacturing and selling, general and administrative costs ($2.2 million); and
- A favorable variance in other components of PE Films of $0.3 million.

Capital Expenditures, Depreciation & Amortization

Capital expenditures in PE Films were $12.4 million in the first six months of 2019 compared to $7.4 million in the first six months of 2018. The Company’s latest estimate for 2019 includes projected capital expenditures of $33 million including: $12 million of a total $25 million needed to complete the North American capacity expansion for elastics products in Personal Care ($8 million spent in the first half of 2019); $4 million for a new scale-up line in Surface Protection to improve development and speed to market for new products; $5 million for other development projects; and $10 million for capital expenditures required to support continuity of current operations.

Depreciation expense was $7.2 million in the first six months of 2019 and $7.6 million in the first six months of 2018. Depreciation expense is projected to be $15 million in 2019.

Other

In June 2018, the Company announced plans to close its facility in Shanghai, China, which primarily produced plastic films used as components for personal care products ("Shanghai transition"). Production ceased at this plant during the fourth quarter of 2018. Total expenses associated with the Shanghai transition were $0.3 million and $0.5 million in the three and six months ended June 30, 2019, respectively, and $3.8 million since project inception. Cash expenditures were $0.3 million and $0.5 million in the three and six months ended June 30, 2019, respectively, and $3.0 million since project inception. An additional $0.5 million of cash expenditures is expected to be needed to complete the project, primarily for severance and other employee related costs. Proceeds from the sale of the plant facilities, which occurred in the third quarter of 2019, are expected to be $6.5 million, net of related expenses.

The Company plans to further consolidate the production of certain personal care products in the US and Europe and, in connection with this consolidation, to close its PE Films manufacturing facility in Lake Zurich, Illinois, which produces elastic materials. Production at the Lake Zurich plant is expected to cease during the fourth quarter of 2019 with product transfers to the new elastic production line at Terre Haute, Indiana. The Company anticipates product transfers in Europe to take place over the next twelve months. As a result of this consolidation, the Company expects to recognize pre-tax cash costs of $9.3 million associated with these activities comprised of (i) customer-related costs ($1.2 million), (ii) severance and other employee related costs ($3.0 million), and (iii) asset disposal and other cash costs ($5.1 million). In addition, the Company expects non-cash asset write-offs and accelerated depreciation of $1.7 million. Pre-tax annual cash savings from consolidating operations of $4 million are expected. Proceeds from the expected sale of Lake Zurich's real property are estimated at approximately $5 million. The Company anticipates that these activities will be completed by the end of 2020.

Flexible Packaging Films

A summary of operating results from ongoing operations for Flexible Packaging Films, which is also referred to as Terphane, is provided below:

	Three Months Ended June 30,		Favorable/ (Unfavorable) % Change	Six Months Ended June 30,		Favorable/ (Unfavorable) % Change
(In thousands, Except Percentages)	2019	2018		2019	2018	
Sales volume (lbs)	26,460	23,701	11.6%	51,921	47,018	10.4%
Net sales	$ 33,443	$ 28,304	18.2%	$ 67,062	$ 56,741	18.2%
Operating profit from ongoing operations	$ 2,517	$ 1,294	94.5%	$ 5,377	$ 3,008	78.8%

Second Quarter 2019 Results vs. Second Quarter 2018 Results

Net sales increased in the second quarter of 2019 compared to the second quarter of 2018 due to higher sales volume and increased selling prices associated with the passthrough of higher resin costs. The higher sales volume was associated with increased production capacity for Terphane's Brazilian operations resulting from the re-start of a previously idled production line in June 2018.

Terphane's operating results from ongoing operations in the second quarter of 2019 increased by $1.2 million versus the second quarter of 2018 primarily due to:

- Higher volume ($1.1 million) and higher selling prices ($0.4 million), partially offset by higher fixed and variable costs ($1.1 million) and costs related to the restarted line ($0.3 million);
- Net favorable foreign currency translation of Real-denominated operating costs ($0.9 million); and
- Net lower foreign currency transaction losses of $0.2 million (losses of $0.1 million in 2019 versus losses of $0.3 million in 2018).

First Six Months 2019 Results vs. First Six Months 2018 Results

Net sales and volume increased in the first six months of 2019 compared to the first six months of 2018. The factors impacting sales for Terphane during the first half of 2019 versus last year are similar to the factors described above in the quarterly comparison.

Terphane's operating results from ongoing operations in the first six months of 2019 increased by $2.4 million versus the first six months of 2018 primarily due to:

- Higher sales volume ($2.0 million) and higher selling prices ($0.8 million), partially offset by higher fixed and variable costs ($1.9 million) and costs related to the restarted line ($0.6 million);

- Net favorable foreign currency translation of Real-denominated operating costs of $1.6 million;

- Net lower foreign currency transaction losses of $0.4 million (break even in 2019 versus losses of $0.4 million in 2018).

Capital Expenditures, Depreciation & Amortization

Capital expenditures in Terphane were $3.0 million in the first six months of 2019 compared to $1.4 million in the first six months of 2018. Capital expenditures are projected to be $12 million in 2019, including $7 million for new capacity for value-added products and productivity projects and $5 million for capital expenditures required to support continuity of current operations. Depreciation expense was $0.5 million in the first six months of 2019 and $0.4 million in the first six months of 2018. Depreciation expense is projected to be $1.0 million in 2019. Amortization expense was $0.2 million in the first six months of 2019 and $0.2 million in the first six months of 2018, and is projected to be $0.5 million in 2019.

Aluminum Extrusions

A summary of operating results from ongoing operations for Aluminum Extrusions is provided below:

(In thousands, Except Percentages)	Three Months Ended June 30, 2019	Three Months Ended June 30, 2018	Favorable/ (Unfavorable) % Change	Six Months Ended June 30, 2019	Six Months Ended June 30, 2018	Favorable/ (Unfavorable) % Change
Sales volume (lbs)	53,127	55,057	(3.5)%	106,839	106,560	0.3%
Net sales	$ 136,757	$ 144,558	(5.4)%	$ 275,804	$ 272,793	1.1%
Operating profit from ongoing operations	$ 14,518	$ 13,156	10.4 %	$ 26,603	$ 23,355	13.9%

Second Quarter 2019 Results vs. Second Quarter 2018 Results

Net sales in the second quarter of 2019 decreased versus 2018 primarily due to lower sales volume and the passthrough of lower metal costs, partially offset by an increase in average selling prices to cover higher operating costs. Sales volume in the second quarter of 2019 decreased by 3.5% versus 2018 due to lower volume in the building and construction and specialty markets.

Operating profit from ongoing operations in the second quarter of 2019 increased by $1.4 million in comparison to the second quarter of 2018, due to higher pricing ($2.6 million) and improved performance at the Niles, Michigan facility ($0.4 million), partially offset by lower volumes ($1.2 million) and higher freight costs ($0.5 million).

First Six Months 2019 Results vs. First Six Months 2018 Results

Net sales in the first six months of 2019 increased versus 2018 primarily due to higher volume in the first quarter of 2019 and an increase in average selling price to cover higher operating costs, partially offset by the passthrough of lower metal costs. Sales volume in the first six months of 2019 was relatively flat versus 2018. Higher average net selling prices had a favorable impact on net sales of $2.0 million, and higher volume improved net sales by $1.1 million.

Operating profit from ongoing operations in the first six months of 2019 increased by $3.2 million in comparison to the first six months of 2018, primarily due to higher pricing ($10.9 million) and higher volume ($0.5 million), partially offset by increased labor and employee-related expenses ($3.9 million), higher operating costs including increased freight costs ($1.4 million), higher supplies and maintenance in the first quarter of 2019 ($1.3 million) and other costs ($1.4 million).

Capital Expenditures, Depreciation & Amortization

Capital expenditures in Aluminum Extrusions were $8.8 million in the first six months of 2019 compared to $5.6 million in the first six months of 2018. Capital expenditures are projected to be $17 million in 2019, including approximately $7 million for infrastructure upgrades at the Carthage, Tennessee facility and other productivity improvements, approximately $1 million for fabrication and automation capabilities, and approximately $9 million required to support continuity of current operations. Depreciation expense was $6.7 million in the first six months of 2019 compared to $6.6 million in the first six months of 2018, and is projected to be $13 million in 2019. Amortization expense was $1.5 million in the first six months of 2019 and $1.8 million in the first six months of 2018, and is projected to be $3 million in 2019.

Corporate Expenses, Interest and Taxes

Pension expense was $4.8 million in the first six months of 2019, versus $5.1 million in the first six months of 2018. The impact on earnings from pension expense is reflected in "Corporate expenses, net" in the net sales and operating profit by segment table in Note 11. Pension expense is projected to be approximately $9.7 million in 2019. Corporate expenses, net, increased in the first six months of 2019 versus 2018 primarily due to higher stock-based employee compensation ($0.7 million), and consulting fees ($2.9 million) related to the identification and remediation of previously disclosed material weaknesses in the Company's internal control over financial reporting, business development activities, and implementation of new accounting guidance.

Interest expense was $2.5 million in the first six months of 2019 in comparison to $3.2 million in the first six months of 2018, primarily due to lower average debt levels.

The effective tax rate used to compute income taxes in the first six months of 2019 was 19.8% compared to 23.0% in the first six months of 2018. The differences between the U.S. federal statutory rate and the effective tax rate for the first six months is shown in the table provided in Note 12.

Net capitalization and other credit measures are provided in ***Liquidity and Capital Resources***.

Critical Accounting Policies

In the ordinary course of business, the Company makes a number of estimates and assumptions relating to the reporting of results of operations and financial position in the preparation of financial statements in conformity with generally accepted accounting principles in the United States ("GAAP"). The Company believes the estimates, assumptions and judgments described in the section "Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies" of the 2018 Form 10-K have the greatest potential impact on our financial statements, so Tredegar considers these to be its critical accounting policies. These policies include accounting for impairment of long-lived assets and goodwill, investment accounted for under the fair value method, pension benefits and income taxes. These policies require management to exercise judgments that are often difficult, subjective and complex due to the necessity of estimating the effect of matters that are inherently uncertain. Actual results could differ significantly from those estimates under different assumptions and conditions. The Company believes the consistent application of these policies enables it to provide readers of the financial statements with useful and reliable information about our operating results and financial condition. Since December 31, 2018, there have been no changes in these policies that have had a material impact on results of operations or financial position. For more information on new accounting pronouncements, see Note 13.

Results of Operations

Second Quarter of 2019 Compared with the Second Quarter of 2018

Overall, sales in the second quarter of 2019 decreased by 5.9% compared with the second quarter of 2018. Net sales decreased 16.1% in PE Films. Personal Care volume declined in most product categories due to competitive pressures, including a large portion associated with a previously disclosed customer transition. In addition, net sales were adversely impacted by mix, the timing in the passthrough of changes in resin prices and the decline in the value of currencies for operations outside of the U.S. relative to the U.S. Dollar. Net sales in Flexible Packaging Films increased 18.2% due to higher volume and increased selling prices associated with the passthrough of higher resin costs. Net sales decreased 5.4% in Aluminum Extrusions primarily due to lower sales volume and the passthrough of lower metal costs, partially offset by an increase in average selling prices to cover higher operating costs. For more information on net sales and volume, see the ***Executive Summary***.

Consolidated gross profit (sales minus cost of goods sold and freight) as a percentage of sales was 18.8% in the second quarter of 2019 compared to 16.9% in the second quarter of 2018. The gross profit margin in PE Films increased primarily due to higher profits in Surface Protection as a result of higher selling prices and quality claims in 2018 that did not recur in 2019. The gross profit margin in Flexible Packaging Films increased slightly due to higher volume and selling prices. The gross profit margin in Aluminum Extrusions increased primarily as a result of higher selling prices.

As a percentage of sales, selling, general and administrative ("SG&A") and research and development ("R&D") expenses were 11.8% in the second quarter of 2019, compared with 9.7% in the second quarter of last year. SG&A expenses were up year-over-year, with the higher SG&A percentage in 2019 being attributable to lower net sales in 2019 versus 2018, higher stock-based employee compensation and consulting fees related to remediation activities and other costs relating to the Company's material weaknesses in internal control over financial reporting, business development activities, and implementation of new accounting guidance.

Plant shutdowns, asset impairments, restructurings and other items in the second quarter of 2019 and 2018 are shown in the segment operating profit table in Note 11 and are described in detail in Note 3. A discussion of gains and losses on investments can be found in Note 7.

Interest expense was $1.3 million in the second quarter of 2019 compared to $1.6 million in the second quarter of 2018. Average debt outstanding and interest rates were as follows:

	Three Months Ended June 30,	
(In Millions)	2019	2018
Floating-rate debt with interest charged on a rollover basis at one-month LIBOR plus a credit spread:		
Average outstanding debt balance	$ 99.9	$ 133.1
Average interest rate	4.3%	3.8%

First Six Months 2019 Results vs. First Six Months 2018 Results

Overall, sales in the first six months of 2019 decreased by 4.9% compared with the first six months of 2018. Net sales decreased 22.6% in PE Films. Personal Care volume declined in most product categories due to competitive pressures, including a large portion associated with a previously disclosed customer transition. In addition, net sales were adversely impacted by mix, the timing in the passthrough of changes in resin prices and the decline in the value of currencies for operations outside of the U.S. relative to the U.S. Dollar. Sales were down in Surface Protection in the first quarter of 2019, which the Company believes was the result of customer inventory builds in previous periods. Net sales in Flexible Packaging Films increased 18.2% due to additional production from the restart of a previously idled manufacturing line in the second quarter of 2018 and higher selling prices associated with the passthrough of higher resin costs. Net sales increased 1.1% in Aluminum Extrusions primarily due to higher sales volume in the first quarter of 2019 and an increase in average selling prices to cover higher operating costs. For more information on net sales and volume, see the ***Executive Summary***.

Consolidated gross profit (sales minus cost of goods sold and freight) as a percentage of sales was 17.2% in the first six months of 2019 compared to 17.5% in the first six months of 2018. The gross profit margin in PE Films decreased primarily due to lower volume in Personal Care and Surface Protection. The gross profit margin in Flexible Packaging Films increased due to higher volume. The gross profit margin in Aluminum Extrusions increased primarily as a result of higher selling prices.

As a percentage of sales, SG&A and R&D expenses were 11.2% in the first six months of 2019, compared with 9.9% in the first six months of last year. SG&A expenses were up slightly year-over-year, with the higher SG&A percentage in 2019 being attributable to lower net sales in 2019 versus 2018, higher stock-based employee compensation and consulting fees related to remediation activities and other costs relating to the Company's material weaknesses in internal control over financial reporting, business development activities, and implementation of new accounting guidance.

Plant shutdowns, asset impairments, restructurings and other items in the first six months of 2019 and 2018 are shown in the segment operating profit table in Note 11 and are described in detail in Note 3. A discussion of gains and losses on investments can also be found in Note 7.

Interest expense was $2.5 million in the first six months of 2019 compared to $3.2 million in the first six months of 2018. Average debt outstanding and interest rates were as follows:

	Six Months Ended June 30,	
(In Millions)	2019	2018
Floating-rate debt with interest charged on a rollover basis at one-month LIBOR plus a credit spread:		
Average outstanding debt balance	$ 104.3	$ 144.0
Average interest rate	4.2%	3.6%

Liquidity and Capital Resources

Tredegar’s management continues to focus on improving working capital management. Measures such as days sales outstanding (“DSO”), days inventory outstanding (“DIO”) and days payables outstanding (“DPO”) are used to evaluate changes in working capital. Changes in operating assets and liabilities from December 31, 2018 to June 30, 2019 are summarized as follows:

- Accounts and other receivables decreased $8.4 million (6.7%).
  - Accounts and other receivables in PE Films decreased by $6.5 million primarily due to lower net sales for Personal Care products, a focus on collection efforts and the timing of cash receipts. DSO (represents trailing 12 months net sales divided by a rolling 12-month average of accounts and other receivables balances) was approximately 43.7 days for the 12 months ended June 30, 2019 and 43.2 days for the 12 months ended December 31, 2018.
  - Accounts and other receivables in Flexible Packaging Films increased by $1.1 million primarily due to the timing of cash receipts. DSO was approximately 39.2 days for the 12 months ended June 30, 2019 and 43.7 days for the 12 months ended December 31, 2018.
  - Accounts and other receivables in Aluminum Extrusions decreased by $2.9 million primarily due to lower sales volume and the timing of cash receipts. DSO was approximately 46.8 days for the 12 months ended June 30, 2019 and 44.6 days for the 12 months ended December 31, 2018.
- Inventories decreased $0.5 million (0.5%).
  - Inventories in PE Films decreased by $1.2 million primarily due to lower sales and the timing of raw material purchases. DIO (represents trailing 12 months costs of goods sold calculated on a first-in, first-out basis divided by a rolling 12-month average of inventory balances calculated on the first-in, first-out basis) was approximately 54.8 days for the 12 months ended June 30, 2019 and 54.9 days for the 12 months ended December 31, 2018.
  - Inventories in Flexible Packaging Films increased by approximately $1.9 million primarily due to a higher production level leading to more finished goods on hand. DIO was approximately 91.1 days for the 12 months ended June 30, 2019 and 77.9 days for the 12 months ended December 31, 2018.
  - Inventories in Aluminum Extrusions decreased by $1.2 million due to lower than planned shipments and the timing of purchases. DIO was approximately 36.8 days for the 12 months ended June 30, 2019 and 33.5 days for the 12 months ended December 31, 2018.
- Net property, plant and equipment increased $7.3 million (3.2%) primarily due to capital expenditures of $24.3 million, which exceeded depreciation expenses of $14.5 million.
- Other identifiable intangibles, net decreased by $1.8 million (4.9%) due to amortization expense of $1.8 million.
- Accounts payable decreased $5.9 million (5.2%).
  - Accounts payable in PE Films decreased $1.6 million due to the normal volatility associated with the timing of payments. DPO (represents trailing 12 months costs of goods sold calculated on a first-in, first-out basis divided by a rolling 12-month average of accounts payable balances) was approximately 43.6 days for the 12 months ended June 30, 2019 and 43.7 days for the 12 months ended December 31, 2018.
  - Accounts payable in Flexible Packaging Films decreased $0.3 million due to the normal volatility associated with the timing of payments. DPO was approximately 54.9 days for the 12 months ended June 30, 2019 and 51.9 days for the 12 months ended December 31, 2018.
  - Accounts payable in Aluminum Extrusions decreased by $4.7 million primarily due to lower volume and the normal volatility associated with the timing of payments. DPO was approximately 50.0 days for the 12 months ended June 30, 2019 and 49.7 days for the 12 months ended December 31, 2018.
- Accrued expenses increased by $4.0 million (9.4%) from December 31, 2018 primarily due to the recording of a liability offsetting the receipt of a $5.1 million deposit received for the sale of PE Films’ idle Shanghai manufacturing facilities (“Shanghai deposit”).

Cash provided by operating activities was $68.5 million in the first six months of 2019 compared with $71.8 million in the first six months of 2018. The decrease is primarily due to the net of income tax refunds received in 2018 over income tax refunds made in the same period in 2019 ($25.0 million) and lower operating profit before depreciation and amortization from ongoing operations ($6.9 million), partially offset by the receipt of a $17.6 million dividend from kaleo and the $5.1 million Shanghai deposit.

Cash used in investing activities was $24.2 million in the first six months of 2019 compared with $9.2 million in the first six months of 2018. Cash used in investing activities primarily represents capital expenditures, which were $24.3 million and $14.5 million in the first six months of 2019 and 2018, respectively. Additionally, in the first quarter of 2018, the Company received $5 million from escrowed funds related to an earnout from the acquisition of Futura, of which $4.3 million was classified in cash flows for investing activities.

Cash used in financing activities was $38.4 million in the first six months of 2019 primarily related to net repayments of $30.3 million (including debt financing fees of $1.8 million) under the Credit Agreement and the payment of regular quarterly dividends of $7.3 million (22 cents per share). Cash used in financing activities was $35.4 million in the first six months of 2018 and was primarily related to net repayments of $29.0 million under the Credit Agreement (as defined below) and the payment of regular quarterly dividends of $7.3 million (22 cents per share).

Further information on cash flows for the six months ended June 30, 2019 and 2018 is provided in the consolidated statements of cash flows.

On June 28, 2019, Tredegar entered into a $500 million five-year, secured revolving credit agreement ("Credit Agreement"), with an option to increase that amount by $100 million. The Credit Agreement amends and restates the Company's previous $400 million five-year, secured revolving credit agreement that was due to expire on March 1, 2021.

Net capitalization and indebtedness as defined under the Credit Agreement as of June 30, 2019 were as follows:

Net Capitalization and Indebtedness as of June 30, 2019 (In thousands)		
Net capitalization:		
Cash and cash equivalents	$	34,660
Debt:		
Credit Agreement		73,000
Debt, net of cash and cash equivalents		38,340
Shareholders' equity		388,276
Net capitalization	$	426,616
Indebtedness as defined in Credit Agreement:		
Total debt	$	73,000
Other		—
Indebtedness	$	73,000

The credit spread and commitment fees charged on the unused amount under the Credit Agreement at various indebtedness-to-adjusted EBITDA levels are as follows:

Pricing Under The Credit Agreement (Basis Points)		
Indebtedness-to-Adjusted EBITDA Ratio	Credit Spread Over LIBOR	Commitment Fee
> 3.5x but <= 4.0x	200.0	40
> 3.0x but <= 3.5x	187.5	35
> 2.0x but <= 3.0x	175.0	30
> 1.0x but <= 2.0x	162.5	25
<= 1.0x	150.0	20

At June 30, 2019, the interest rate on debt under the Credit Agreement existing at that date was priced at one-month LIBOR plus the applicable credit spread of 162.5 basis points. Under the Credit Agreement, borrowings are permitted up to $500 million, and approximately $342 million was available to borrow at June 30, 2019 based upon the most restrictive covenants within the Credit Agreement.

The most restrictive covenants in the Credit Agreement include:

- Maximum indebtedness-to-adjusted EBITDA ("Leverage Ratio") of 4.00x;

- Minimum adjusted EBITDA-to-interest expense of 3.00x; and
- Maximum aggregate distributions to shareholders over the term of the Credit Agreement of $130 million plus, beginning with the fiscal quarter ended June 30, 2019, 50% of net income and, at a Leverage Ratio of equal to or greater than 3.00x, a limitation on such payments for the succeeding quarter at the greater of (i) $4.75 million and (ii) 50% of consolidated net income for the most recent fiscal quarter.

The Credit Agreement is secured by substantially all of the Company’s and its domestic subsidiaries’ assets, including equity in certain material first-tier foreign subsidiaries.

The computations of adjusted EBITDA, the leverage ratio and interest coverage ratio as defined in the Credit Agreement are presented below. Adjusted EBITDA, as defined in the Credit Agreement, is not intended to represent net income (loss) or cash flow from operations as defined by GAAP and should not be considered as an alternative to either net income (loss) or to cash flow.

Computations of Adjusted EBITDA, Leverage Ratio and Interest Coverage Ratio as Defined in the Credit Agreement Along with Related Most Restrictive Covenants as of and for the Twelve Months Ended June 30, 2019 (In Thousands)	
Computation of adjusted EBITDA as defined in the Credit Agreement for the twelve months ended June 30, 2019:	
Net income (loss)	$ 26,216
Plus:	
After-tax losses related to discontinued operations	—
Total income tax expense for continuing operations	10,159
Interest expense	4,976
Depreciation and amortization expense (excluding amortization of right-of-use lease assets) for continuing operations	33,309
All non-cash losses and expenses, plus cash losses and expenses not to exceed $10,000, for continuing operations that are classified as unusual, extraordinary or which are related to plant shutdowns, asset impairments and/or restructurings (cash-related of $9,963)	58,067
Charges related to stock option grants and awards accounted for under the fair value-based method	2,143
Losses related to the application of the equity method of accounting	—
Losses related to adjustments in the estimated fair value of assets accounted for under the fair value method of accounting	—
Minus:	
After-tax income related to discontinued operations	—
Total income tax benefits for continuing operations	—
Interest income	(192)
All non-cash gains and income, plus cash gains and income in excess of $10,000, for continuing operations that are classified as unusual, extraordinary or which are related to plant shutdowns, asset impairments and/or restructurings	(250)
Income related to changes in estimates for stock option grants and awards accounted for under the fair value-based method	—
Income related to the application of the equity method of accounting	—
Income related to adjustments in the estimated fair value of assets accounted for under the fair value method of accounting	(40,782)
Plus cash dividends declared on investments in an amount not to exceed $10,000 for such period	10,000
Plus or minus, as applicable, pro forma EBITDA adjustments associated with acquisitions and asset dispositions	—
Adjusted EBITDA as defined in the Credit Agreement	103,646
Computations of leverage and interest coverage ratios as defined in the Credit Agreement at June 30, 2019:	
Leverage ratio (indebtedness-to-adjusted EBITDA)	.7x
Interest coverage ratio (adjusted EBITDA-to-interest expense)	20.83x
Most restrictive covenants as defined in the Credit Agreement:	
Maximum permitted aggregate amount of dividends that can be paid by Tredegar during the term of the Credit Agreement ($130,000 plus 50% of net income generated for each quarter beginning April 1, 2019)	$ 137,239
Maximum leverage ratio permitted	4.00
Minimum interest coverage ratio permitted	3.00

As of June 30, 2019, Tredegar was in compliance with all financial covenants in the Credit Agreement. Noncompliance with any one or more of the debt covenants may have a material adverse effect on the Company’s financial condition or liquidity in the event such noncompliance cannot be cured or should the Company be unable to obtain a waiver from the lenders as we would not be permitted to borrow under the credit facility and any amounts outstanding would become due and payable. Renegotiation of the covenant(s) through an amendment to the Credit Agreement could effectively cure the noncompliance, but could have an effect on financial condition or liquidity depending upon how the covenant is renegotiated.

At June 30, 2019, the Company had cash and cash equivalents of $34.7 million, including funds held by locations outside the U.S. of $24.3 million. Restricted cash of $5.1 million held in a Chinese bank represents a deposit for the sale of PE Films idle Shanghai manufacturing facility, which sale closed in the third quarter of 2019.

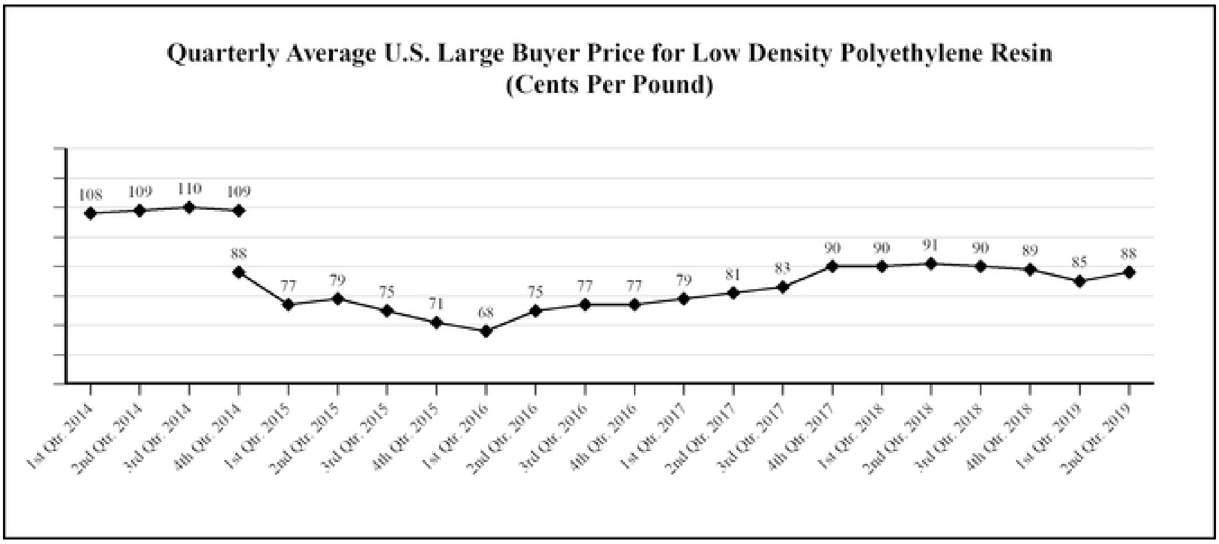
The Company believes that existing borrowing availability, current cash balances and cash flow from operations will be sufficient to satisfy its working capital, capital expenditure and dividend requirements for the next 12 months.

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Tredegar has exposure to the volatility of interest rates, polyethylene and polypropylene resin prices, Terephthalic Acid (“PTA”) and Monoethylene Glycol (“MEG”) prices, aluminum ingot and scrap prices, energy prices, foreign currencies and emerging markets. See ***Liquidity and Capital Resources*** regarding interest rate exposures related to borrowings under the Credit Agreement.

Changes in polyethylene resin prices, and the timing of those changes, could have a significant impact on profit margins in PE Films. Changes in polyester resin, PTA and MEG prices, and the timing of those changes, could have a significant impact on profit margins in Flexible Packaging Films. Profit margins in Aluminum Extrusions are sensitive to fluctuations in aluminum ingot and scrap prices as well as natural gas prices (natural gas is the principal energy source used to operate its casting furnaces). There is no assurance of the Company’s ability to pass through higher raw material and energy costs to its customers.

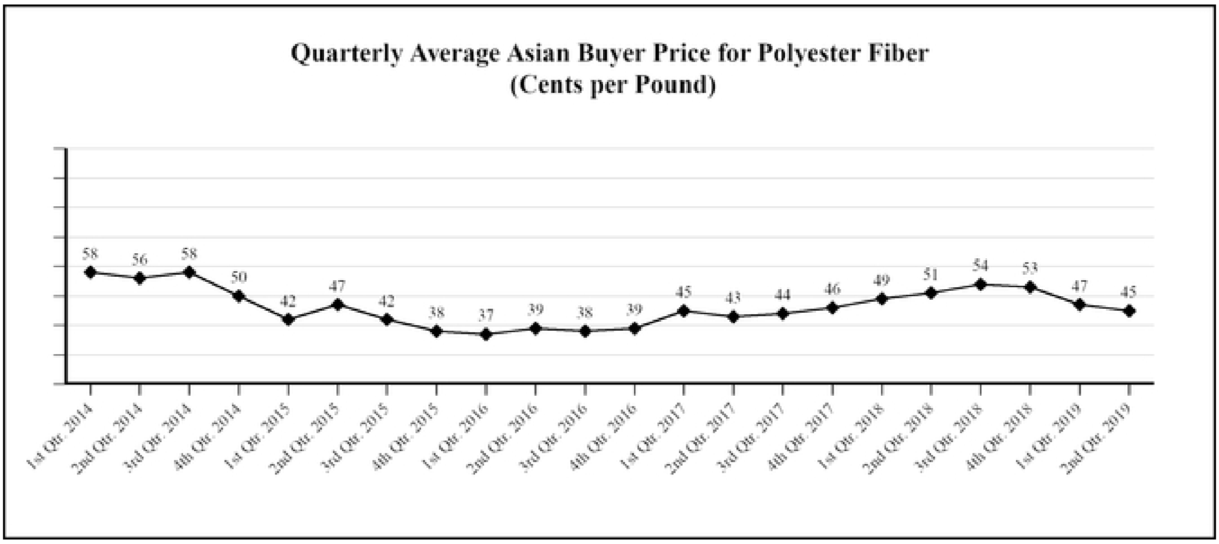
The volatility of average quarterly prices of low-density polyethylene resin in the U.S. (a primary raw material for PE Films) is shown in the chart below.



Source: Quarterly averages computed by Tredegar using monthly data provided by IHS, Inc. In January 2015, IHS reflected a 21 cents per pound non-market adjustment based on their estimate of the growth of discounts in prior periods. The 4th quarter 2014 average rate of $1.09 per pound is shown on a pro forma basis as if the non-market adjustment was made in the fourth quarter of 2014.

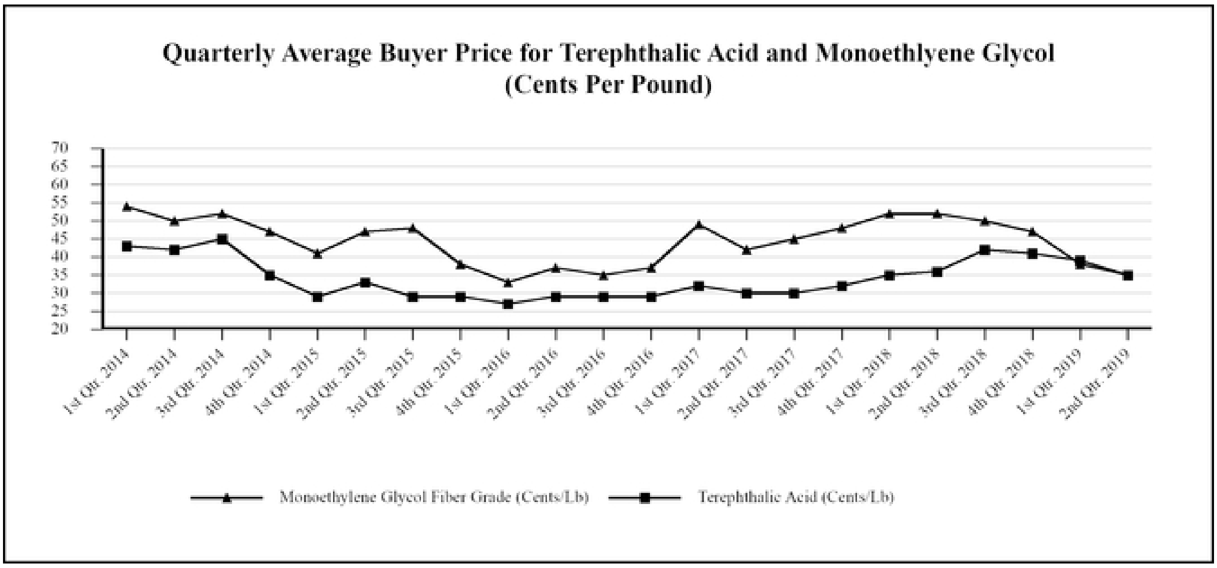
Polyethylene resin prices in Europe, Asia and South America have exhibited similar long-term trends. The price of resin is driven by several factors, including supply and demand and the price of oil, ethylene and natural gas. To address fluctuating resin prices, PE Films has index-based passthrough raw material cost agreements for the majority of its business. However, under certain agreements, changes in resin prices are not passed through for an average period of 90 days (see ***Executive Summary*** for more information). Pricing on the remainder of the business is based upon raw material costs and supply/demand dynamics within the markets that the Company competes.

Polyester resins, MEG and PTA used in flexible packaging films produced in Brazil are primarily purchased domestically, with other sources available mostly from Asia and the U.S. Given the nature of these products as commodities, pricing is derived from Asian pricing indexes. The volatility of the average quarterly prices for polyester fibers in Asia, which is representative of polyester resin (a primary raw material for Flexible Packaging Films) pricing trends, is shown in the chart below:



Source: Quarterly averages computed by Tredegar using monthly data from CMAI Global Index data.

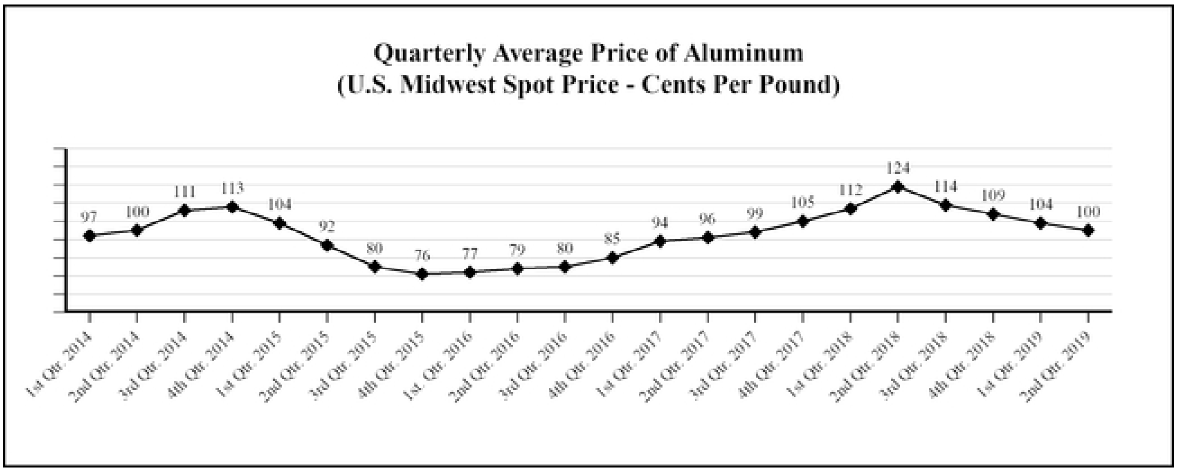
The volatility of average quarterly prices of PTA and MEG in Asia (raw materials used in the production of polyester resins produced by Flexible Packaging Films) is shown in the chart below:



Source: Quarterly averages computed by Tredegar using monthly data from CMAI Global Index data.

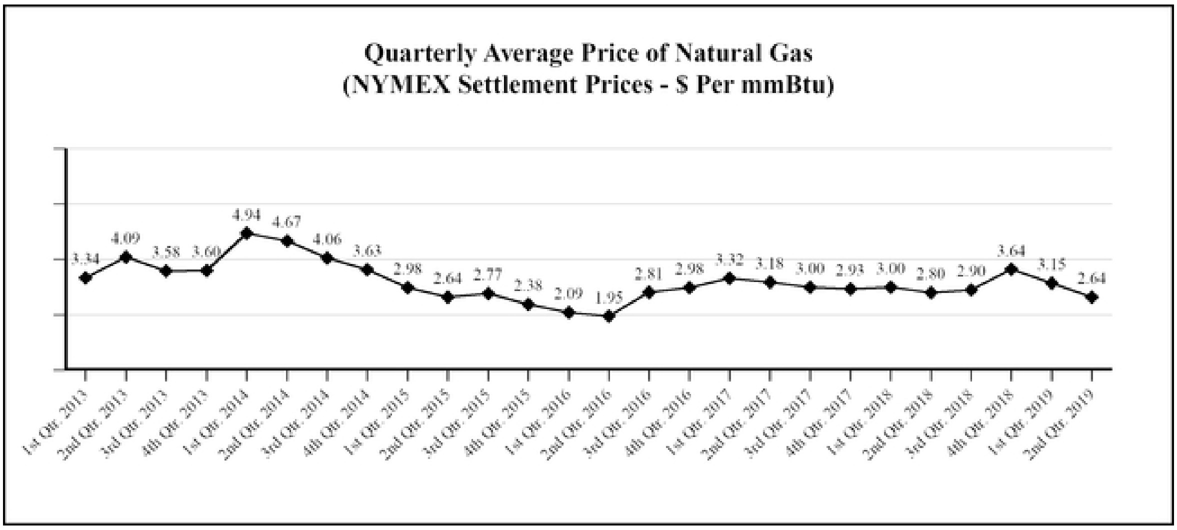
In the normal course of business, Aluminum Extrusions enters into fixed-price forward sales contracts with certain customers for the sale of fixed quantities of aluminum extrusions at scheduled intervals. In order to hedge its exposure to aluminum price volatility (see the chart below) under these fixed-price arrangements, which generally have a duration of not more than 12 months, the Company enters into a combination of forward purchase commitments and futures contracts to acquire or hedge aluminum, based on the scheduled deliveries. See Note 8 for additional information.

The volatility of quarterly average aluminum prices is shown in the chart below.



Source: Quarterly averages computed using daily Midwest average prices provided by Platts.

The volatility of quarterly average natural gas prices is shown in the chart below.



Source: Quarterly averages computed by Tredegar using monthly NYMEX settlement prices.

The Company sells to customers in foreign markets through its foreign operations and through exports from U.S. plants. The percentage of sales for manufacturing operations related to foreign markets for the first six months of 2019 and 2018 are as follows:

Percentage of Net Sales from Ongoing Operations Related to Foreign Markets*				
	Six Months Ended June 30,			
	2019		2018	
	Exports From U.S.	Foreign Operations	Exports From U.S.	Foreign Operations
Canada	2%	—%	5%	—%
Europe	1	6	1	8
Latin America	1	12	1	9
Asia	8	—	8	1
Total	12%	18%	15%	18%

* The percentages for foreign markets are relative to Tredegar's total net sales from ongoing operations

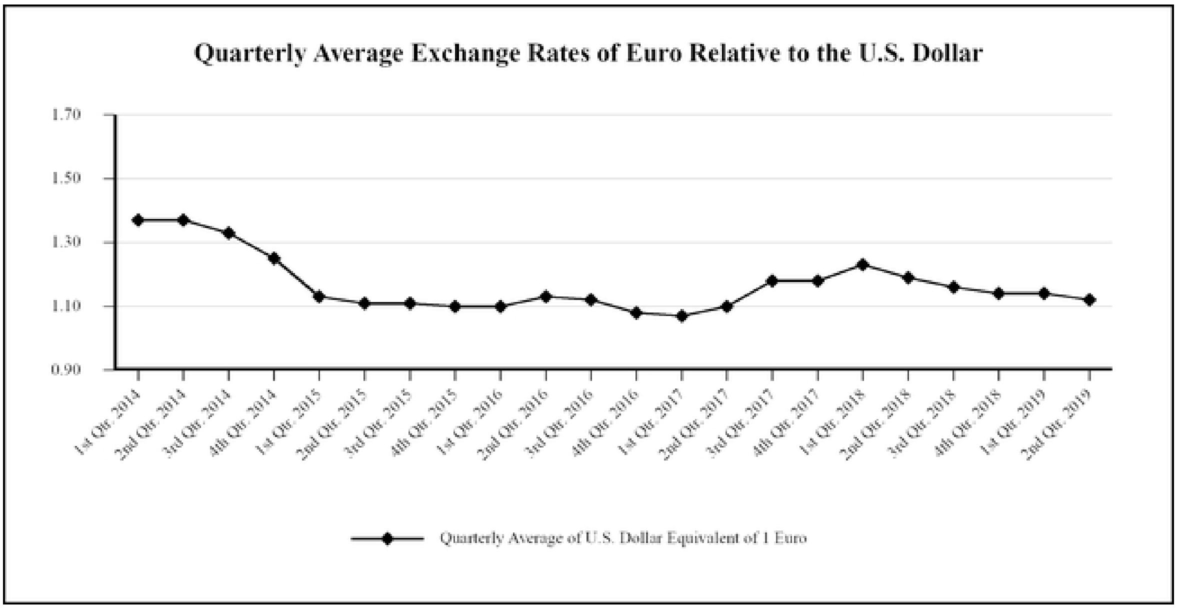
Tredegar attempts to match the pricing and cost of its products in the same currency and generally views the volatility of foreign currencies and emerging markets, and the corresponding impact on earnings and cash flow, as part of the overall risk of operating in a global environment (for additional information, see trends for the Euro, Brazilian Real and Chinese Yuan in the charts on the following page). Exports from the U.S. are generally denominated in U.S. Dollars. The Company's foreign currency exposure on income from continuing foreign operations relates to the Euro, the Chinese Yuan, the Hungarian Forint, the Brazilian Real and the Indian Rupee.

PE Films is generally able to match the currency of its sales and costs for its product lines. For flexible packaging films produced in Brazil, selling prices and key raw material costs are principally determined in U.S. Dollars and are impacted by local economic conditions. Competition in Brazil, Terphane's primary market, has been exacerbated by global overcapacity in the polyester industry generally, and by particularly acute overcapacity in Latin America. These factors have resulted in significant competitive pricing pressures and U.S. Dollar equivalent margin compression. Moreover, variable conversion, fixed conversion and sales, general and administrative costs for operations in Brazil have been adversely impacted by inflation in Brazil that is higher than in the U.S. Flexible Packaging Films is exposed to additional foreign exchange translation risk (its functional currency is the Brazilian Real) because almost 90% of the sales of Flexible Packaging Films business unit in Brazil ("Terphane Ltda.") are quoted or priced in U.S. Dollars while a large majority of its Brazilian costs are quoted or priced in Brazilian Real. This mismatch, together with a variety of economic variables impacting currency exchange rates, causes volatility that could negatively or positively impact operating profit for Flexible Packaging Films.

The Company's earnings are exposed to foreign currency exchange risk primarily through the translation of the financial statements of subsidiaries that have a functional currency other than the U.S. Dollar. The Company estimates that the net mismatch translation exposure between Terphane Ltda.'s U.S. Dollar quoted or priced sales and underlying Brazilian Real quoted or priced operating costs (excluding depreciation and amortization) is annual net costs of R$125 million. Terphane Ltda. has outstanding foreign exchange average forward rate contracts to purchase Brazilian Real and sell U.S. Dollars to hedge its exposure. See Note 8 for more information on outstanding hedging contracts and this hedging program.

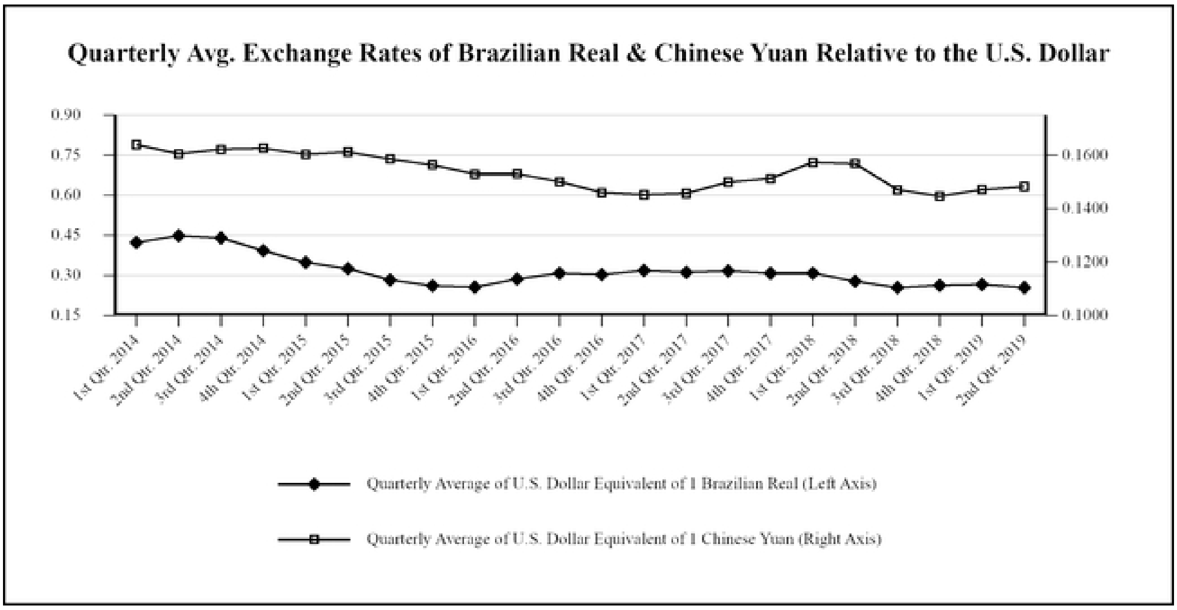
Tredegar estimates that the change in the value of foreign currencies relative to the U.S. Dollar on PE Films had a unfavorable impact on operating profit from ongoing operations in PE Films of $0.4 million in the second quarter of 2019 compared with the second quarter of 2018 and had a unfavorable impact of $0.2 million in the first six months of 2019 compared with the first six months of 2018.

The trend for the Euro exchange rate relative to the U.S. Dollar is shown in the chart below.



Source: Quarterly averages computed by Tredegar using daily closing data provided by Bloomberg.

Trends for the Brazilian Real and Chinese Yuan exchange rates relative to the U.S. Dollar are shown in the chart below.



Source: Quarterly averages computed by Tredegar using daily closing data provided by Bloomberg.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

In connection with the preparation of this Form 10-Q, pursuant to Rule 13a-15(b) under the Exchange Act, the Company carried out an evaluation, with the participation of its management, including its Chief Executive Officer (principal executive officer) and Chief Financial Officer (principal financial officer), of the effectiveness of disclosure controls and procedures (as defined under Rule 13a-15(e) and 15d-15(e) under the Exchange Act) as of June 30, 2019.

Based on this evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that, because of the material weaknesses in internal control over financial reporting discussed below, the Company's disclosure controls and procedures were not effective as of June 30, 2019, to ensure: (i) that information required to be disclosed by the Company in the reports that it files or submits under the Exchange Act, is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms, and (ii) that such information is accumulated and communicated to management, including the Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

Management's Report on Internal Control Over Financial Reporting as of December 31, 2018

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. The Company's internal control over financial reporting is a process designed by or under the supervision of the Company's Chief Executive Officer and Chief Financial Officer, and overseen by the Board of Directors, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of published financial statements for external purposes in accordance with GAAP and includes policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that the Company's receipts and expenditures are being made only in accordance with the authorization of its management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Company's assets that could have a material effect on the consolidated financial statements.

Because of its inherent limitations, internal control over financial reporting is not intended to provide absolute assurance that a misstatement of the Company's consolidated financial statements would be prevented or detected. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of the annual or interim financial statements will not be prevented or detected on a timely basis.

Management conducted an evaluation of the effectiveness of the Company's internal control over financial reporting using the criteria in *Internal Control - Integrated Framework 2013* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "2013 COSO Framework"). As a result of this evaluation, management concluded, as disclosed in the 2018 Form 10-K, that the Company's internal control over financial reporting was not effective as of December 31, 2018, because of the material weaknesses in internal control over financial reporting discussed below.

- ***Control Environment***: The Company did not have a sufficient number of trained resources with assigned responsibility and accountability for the design, operation and documentation of internal control over financial reporting in accordance with the 2013 COSO Framework.
- ***Risk Assessment***: The Company did not have an effective risk assessment process that defined clear financial reporting objectives and evaluated risks, including fraud risks, and risks resulting from changes in the external environment and business operations, at a sufficient level of detail to identify all relevant risks of material misstatement across the entity.
- ***Information and Communication***: The Company did not have an effective information and communication process that identified and assessed the source of and controls necessary to ensure the reliability of information used in financial reporting and that communicates relevant information about roles and responsibilities for internal control over financial reporting.

- ***Monitoring Activities***: The Company did not have effective monitoring activities to assess the operation of internal control over financial reporting, including the continued appropriateness of control design and level of documentation maintained to support control effectiveness.
- ***Control Activities***: As a consequence of the material weaknesses described above, internal control deficiencies related to the design and operation of process-level controls and general information technology controls were determined to be pervasive throughout the Company's financial reporting processes.

While these material weaknesses did not result in material misstatements of the Company's financial statements as of and for the year ended December 31, 2018, these material weaknesses create a reasonable possibility that a material misstatement of account balances or disclosures in annual or interim consolidated financial statements may not be prevented or detected in a timely manner. Accordingly, the Company concluded that the deficiencies represent material weaknesses in its internal control over financial reporting and its internal control over financial reporting was not effective as of December 31, 2018.

The Company's independent registered public accounting firm, KPMG LLP, which audited the 2018 consolidated financial statements included in the 2018 Form 10-K, expressed an adverse opinion on the operating effectiveness of the Company's internal control over financial reporting.

Remediation Plan

The Company's remediation efforts are ongoing and it will continue its initiatives to implement and document policies and procedures, and strengthen the Company's internal control environment. Remediation of the identified material weaknesses and strengthening the Company's internal control environment will require a substantial effort throughout 2019, and those efforts will extend into 2020. The material weaknesses cannot be considered completely remediated until the applicable controls have operated for a sufficient period of time and management has concluded, through testing, that these controls are operating effectively.

To remediate the material weaknesses described above, the Company plans to pursue the following remediation steps:

1. Perform a comprehensive financial risk assessment and internal control gap analysis to ensure that all relevant risks of material misstatement to the Company's financial statements are identified and that the Company's internal controls are sufficient to address those risks.
2. Review and update, as necessary, documentation of relevant processes, policies and procedures, and design of relevant controls, with respect to the Company's internal control over financial reporting. The Company intends to implement any necessary changes as a result of deficiencies identified in its relevant processes, policies and procedures as promptly as practical and to satisfy documentation requirements under Section 404 of the Sarbanes-Oxley Act.
3. Seek to ensure that the Company's internal control over financial reporting is properly designed, implemented, operating effectively, and appropriately documented by (i) enhancing the design of existing control activities and/or implementing additional control activities, as needed, (ii) monitoring the operating effectiveness of those controls, and (iii) ensuring that sufficient documentation exists to evidence the design, implementation, and operation of those controls.
4. Evaluate and enhance the Company's monitoring activities to ensure the components of internal control under the 2013 COSO Framework are present, functioning, and able to be appropriately evidenced.
5. Design, execute and monitor a plan, with appropriate executive sponsorship, and with the assistance of outside consultants, to enhance the Company's internal control over financial reporting and accomplish the goals of the remediation plan as set forth above.
6. Continue to seek, train and retain individuals that have the appropriate skills and experience related to designing, operating and documenting internal controls.

The Company has hired an internationally recognized accounting firm as its outside consultant, to assist in achieving the objectives described above. The Company and its outside consultant have prepared and delivered to the Audit Committee of the Board a detailed implementation schedule for the remediation plan. The Company believes that its remediation plan will be sufficient to remediate the identified material weaknesses and strengthen its internal control over financial reporting. As the Company continues to evaluate, and works to improve, its internal control over financial reporting, management may determine that additional measures to address control deficiencies or modifications to the remediation plan are necessary. The Company cannot assure you, however, when it will remediate such weaknesses, nor can it be certain whether additional actions will be required or the costs of any such actions. Moreover, the Company cannot assure you that additional material weaknesses will not arise in the future.

Changes in Internal Control Over Financial Reporting

The Company is in the process of implementing certain changes in its internal controls to remediate the material weaknesses described above. The implementation of the material aspects of this plan began in the second quarter of 2019. During the second quarter, with the assistance of its outside consultant, the Company visited key locations throughout the organization to understand and document relevant financial processes and to determine relevant systems that support those processes. This is a necessary step to the conduct of a robust risk assessment and associated control gap analysis and the ultimate remediation of the weaknesses in internal controls. As a result, there has been no change in the Company's internal control over financial reporting during the quarter ended June 30, 2019, that has materially affected, or is reasonably likely to materially affect, its internal control over financial reporting.

PART II - OTHER INFORMATION

Item 1A. Risk Factors.

As disclosed in "Item 1A. Risk Factors" in the 2018 Form 10-K, there are a number of risks and uncertainties that can have a material effect on the operating results of our businesses and our financial condition. There are no additional material updates or changes to our risk factors since the filing of the 2018 Form 10-K.

Item 5. Other Information

On August 7, 2019, the Company approved plans to close its facility in Lake Zurich, Illinois, as part of a larger consolidation project. The information required by Regulation S-K Item 2.05 regarding the closure of the Company's facility in Lake Zurich, Illinois, is included in Part I, Item 1, Note 3 of this Form 10-Q incorporated herein by reference.

Item 6. Exhibits.

Exhibit Nos.	
4.1	Amended and Restated Credit Agreement, dated as of June 28, 2019, among Tredegar Corporation, as borrower, the lenders named therein, JPMorgan Chase Bank, N.A., as administrative agent, SunTrust Bank, Citizens Bank, N.A. and PNC Bank, National Association, as co-syndication agents, and U.S. Bank National Association, Bank of America, N.A. and Wells Fargo Bank, National Association, as co-documentation agents, and the other lenders party thereto (filed as Exhibit 4.1 to Tredegar Corporation's Current Report on Form 8-K (File No. 1-10258), filed on July 1, 2019, and incorporated herein by reference).
4.2	Amended and Restated Guaranty, dated as of June 28, 2019, by and among the subsidiaries of Tredegar Corporation listed on the signature pages thereto in favor of JPMorgan Chase Bank, N.A., as administrative agent, for the ratable benefit of the Holders of Guaranteed Obligations (as defined therein) filed as Exhibit 4.2 to Tredegar Corporation's Current Report on Form 8-K (File No. 1-10258), filed on July 1, 2019, and incorporated herein by reference).
4.3	Amended and Restated Pledge and Security Agreement, dated as of June 28, 2019, by and among Tredegar Corporation and the subsidiaries of Tredegar Corporation listed on the signature pages thereto and JPMorgan Chase Bank, N.A., as administrative agent, for the ratable benefit of the Secured Parties (as defined therein) filed as Exhibit 4.3 to Tredegar Corporation's Current Report on Form 8-K (File No. 1-10258), filed on July 1, 2019, and incorporated herein by reference).
31.1	Certification of President and Chief Executive Officer of Tredegar Corporation, pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Vice President and Chief Financial Officer of Tredegar Corporation, pursuant to Rules 13a-14(a) and 15d-14(a) promulgated under the Securities Exchange Act of 1934, as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1	Certification of President and Chief Executive Officer of Tredegar Corporation, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2	Certification of Vice President and Chief Financial Officer of Tredegar Corporation, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101	XBRL Instance Document and Related Items.

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.

		Tredegar Corporation (Registrant)
Date:	August 8, 2019	/s/ John M. Steitz John M. Steitz President and Chief Executive Officer (Principal Executive Officer)
Date:	August 8, 2019	/s/ D. Andrew Edwards D. Andrew Edwards Vice President and Chief Financial Officer (Principal Financial Officer)
Date:	August 8, 2019	/s/ Frasier W. Brickhouse, II Frasier W. Brickhouse, II Corporate Treasurer and Controller (Principal Accounting Officer)

EXHIBIT 31.1

Section 302 Certification

I, John M. Steitz, certify that:

(1) I have reviewed this Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, of Tredegar Corporation;

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

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

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

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

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

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

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

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

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

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

Date: August 8, 2019

/s/ John M. Steitz

John M. Steitz
President and Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

Section 302 Certification

I, D. Andrew Edwards, certify that:

(1) I have reviewed this Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, of Tredegar Corporation;

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

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

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

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

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

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

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

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

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

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

Date: August 8, 2019

/s/ D. Andrew Edwards

D. Andrew Edwards
Vice President and Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Tredegar Corporation (the “Company”) for the quarter ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, John M. Steitz, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

/s/ John M. Steitz

John M. Steitz
President and Chief Executive Officer
(Principal Executive Officer)
August 8, 2019

EXHIBIT 32.2

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Tredegar Corporation (the "Company") for the quarter ended June 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, D. Andrew Edwards, Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

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

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

/s/ D. Andrew Edwards

D. Andrew Edwards
Vice President and Chief Financial Officer
(Principal Financial Officer)
August 8, 2019