

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

FORM 10-Q

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

For the quarterly period ended September 30, 2017

OR

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 001-12019

QUAKER CHEMICAL CORPORATION

(Exact name of Registrant as specified in its charter)

Pennsylvania  
(State or other jurisdiction of  
incorporation or organization)

23-0993790  
(I.R.S. Employer  
Identification No.)

One Quaker Park, 901 E. Hector Street,  
Conshohocken, Pennsylvania  
(Address of principal executive offices)

19428 - 2380  
(Zip Code)

Registrant's telephone number, including area code: 610-832-4000

Not Applicable

Former name, former address and former fiscal year, if changed since last report.

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company", and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer   
Non-accelerated filer  (Do not check if a smaller reporting company)  
Emerging growth company

Accelerated filer   
Smaller reporting 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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Number of Shares of Common Stock  
Outstanding on September 30, 2017

13,299,294

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**PART I**  
**FINANCIAL INFORMATION**

**Item 1. Financial Statements (Unaudited).**

**Quaker Chemical Corporation**  
**Condensed Consolidated Statements of Income**  
*(Dollars in thousands, except per share data)*

	Unaudited							
	Three Months Ended September 30,			Nine Months Ended September 30,				
	2017		2016	2017		2016		
Net sales	\$	212,918	\$	190,428	\$	609,010	\$	555,420
Cost of goods sold		138,142		119,531		391,512		345,141
Gross profit		74,776		70,897		217,498		210,279
Selling, general and administrative expenses		51,092		47,877		148,740		144,720
Combination-related expenses		9,675		1,157		23,088		1,157
Operating income		14,009		21,863		45,670		64,402
Other income (expense), net		249		(10)		(1,427)		(245)
Interest expense		(793)		(758)		(2,229)		(2,226)
Interest income		762		551		1,825		1,444
Income before taxes and equity in net income of associated companies		14,227		21,646		43,839		63,375
Taxes on income before equity in net income of associated companies		3,140		6,121		14,229		19,664
Income before equity in net income of associated companies		11,087		15,525		29,610		43,711
Equity in net income of associated companies		617		826		2,049		1,389
Net income		11,704		16,351		31,659		45,100
Less: Net income attributable to noncontrolling interest		562		343		1,619		1,131
Net income attributable to Quaker Chemical Corporation	\$	11,142	\$	16,008	\$	30,040	\$	43,969
<b>Per share data:</b>								
Net income attributable to Quaker Chemical Corporation								
Common Shareholders – basic	\$	0.84	\$	1.21	\$	2.26	\$	3.32
Net income attributable to Quaker Chemical Corporation								
Common Shareholders – diluted	\$	0.83	\$	1.21	\$	2.25	\$	3.32
Dividends declared	\$	0.355	\$	0.345	\$	1.055	\$	1.010

*The accompanying notes are an integral part of these condensed consolidated financial statements.*

**Quaker Chemical Corporation**  
**Condensed Consolidated Statements of Comprehensive Income**  
*(Dollars in thousands)*

	Unaudited			
	Three Months Ended		Nine Months Ended	
	September 30,		September 30,	
	2017	2016	2017	2016
Net income	\$ 11,704	\$ 16,351	\$ 31,659	\$ 45,100
Other comprehensive income (loss), net of tax				
Currency translation adjustments	5,764	(715)	18,528	(1,074)
Defined benefit retirement plans	62	460	2,171	1,641
Unrealized gain on available-for-sale securities	286	195	453	808
Other comprehensive income (loss)	6,112	(60)	21,152	1,375
Comprehensive income	17,816	16,291	52,811	46,475
Less: Comprehensive income attributable to noncontrolling interest	(409)	(520)	(2,037)	(1,217)
Comprehensive income attributable to Quaker Chemical Corporation	\$ 17,407	\$ 15,771	\$ 50,774	\$ 45,258

*The accompanying notes are an integral part of these condensed consolidated financial statements.*

**Quaker Chemical Corporation**  
**Condensed Consolidated Balance Sheets**  
*(Dollars in thousands, except par value and share amounts)*

	Unaudited	
	September 30, 2017	December 31, 2016
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents	\$ 109,088	\$ 88,818
Accounts receivable, net	218,243	195,225
Inventories		
Raw materials and supplies	44,300	37,772
Work-in-process and finished goods	45,952	39,310
Prepaid expenses and other current assets	24,272	15,343
Total current assets	441,855	376,468
Property, plant and equipment, at cost	253,548	236,006
Less accumulated depreciation	(167,270)	(150,272)
Net property, plant and equipment	86,278	85,734
Goodwill	85,816	80,804
Other intangible assets, net	73,514	73,071
Investments in associated companies	25,191	22,817
Non-current deferred tax assets	22,229	24,382
Other assets	29,644	28,752
Total assets	\$ 764,527	\$ 692,028
<b>LIABILITIES AND EQUITY</b>		
Current liabilities		
Short-term borrowings and current portion of long-term debt	\$ 700	\$ 707
Accounts and other payables	95,584	82,164
Accrued compensation	20,470	19,356
Accrued restructuring	—	670
Other current liabilities	39,367	24,514
Total current liabilities	156,121	127,411
Long-term debt	72,374	65,769
Non-current deferred tax liabilities	12,618	12,008
Other non-current liabilities	71,355	74,234
Total liabilities	312,468	279,422
Commitments and contingencies (Note 16)		
Equity		
Common stock, \$1 par value; authorized 30,000,000 shares; issued and outstanding 2017 – 13,299,294 shares; 2016 – 13,277,832 shares	13,299	13,278
Capital in excess of par value	113,129	112,475
Retained earnings	380,421	364,414
Accumulated other comprehensive loss	(66,673)	(87,407)
Total Quaker shareholders' equity	440,176	402,760
Noncontrolling interest	11,883	9,846
Total equity	452,059	412,606
Total liabilities and equity	\$ 764,527	\$ 692,028

*The accompanying notes are an integral part of these condensed consolidated financial statements.*

**Quaker Chemical Corporation**  
**Condensed Consolidated Statements of Cash Flows**  
(Dollars in thousands)

	Unaudited	
	Nine Months Ended	
	September 30,	
	2017	2016
<b>Cash flows from operating activities</b>		
Net income	\$ 31,659	\$ 45,100
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	9,464	9,469
Amortization	5,490	5,319
Equity in undistributed earnings of associated companies, net of dividends	(1,919)	(1,314)
Deferred compensation and other, net	(1,190)	3,083
Stock-based compensation	3,269	4,942
(Gain) loss on disposal of property, plant, equipment and other assets	(50)	44
Insurance settlement realized	(542)	(809)
Combination-related expenses, net of payments	10,367	1,157
Pension and other postretirement benefits	608	(3,373)
(Decrease) increase in cash from changes in current assets and current liabilities, net of acquisitions:		
Accounts receivable	(12,946)	(5,926)
Inventories	(9,272)	(3,741)
Prepaid expenses and other current assets	(5,217)	(868)
Accounts payable and accrued liabilities	11,755	4,088
Restructuring liabilities	(675)	(4,194)
Net cash provided by operating activities	<u>40,801</u>	<u>52,977</u>
<b>Cash flows from investing activities</b>		
Investments in property, plant and equipment	(8,032)	(6,311)
Payments related to acquisitions, net of cash acquired	(5,363)	(3,244)
Proceeds from disposition of assets	67	54
Insurance settlement interest earned	35	24
Change in restricted cash, net	507	785
Net cash used in investing activities	<u>(12,786)</u>	<u>(8,692)</u>
<b>Cash flows from financing activities</b>		
Proceeds from long-term debt	4,472	—
Repayments of long-term debt	(488)	(6,842)
Dividends paid	(13,893)	(13,052)
Stock options exercised, other	(2,594)	64
Payments for repurchase of common stock	—	(5,859)
Excess tax benefit related to stock option exercises	—	167
Net cash used in financing activities	<u>(12,503)</u>	<u>(25,522)</u>
Effect of foreign exchange rate changes on cash	4,758	(792)
Net increase in cash and cash equivalents	20,270	17,971
Cash and cash equivalents at beginning of period	88,818	81,053
Cash and cash equivalents at end of period	<u>\$ 109,088</u>	<u>\$ 99,024</u>

*The accompanying notes are an integral part of these condensed consolidated financial statements.*

**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

**Note 1 – Condensed Financial Information**

The condensed consolidated financial statements included herein are unaudited and have been prepared in accordance with generally accepted accounting principles in the United States (“U.S. GAAP”) for interim financial reporting and the United States Securities and Exchange Commission (“SEC”) regulations. Certain information and footnote disclosures normally included in financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and SEC regulations. In the opinion of management, the financial statements reflect all adjustments (consisting only of normal recurring adjustments, except certain material adjustments, as discussed below) which are necessary for a fair statement of the financial position, results of operations and cash flows for the interim periods. The results for the three and nine months ended September 30, 2017, respectively, are not necessarily indicative of the results to be expected for the full year. These financial statements should be read in conjunction with the Company’s Annual Report filed on Form 10-K for the year ended December 31, 2016. During the first quarter of 2017, the Company early adopted an accounting standard update regarding the classification of pension costs. The guidance in this accounting standard update was required to be applied retrospectively, which resulted in a reclassification to the Company’s Condensed Consolidated Statement of Income for the three and nine months ended September 30, 2016, respectively. See Note 3 of Notes to Condensed Consolidated Financial Statements.

Venezuela’s economy has been considered hyper inflationary under U.S. GAAP since 2010, at which time the Company’s Venezuela equity affiliate, Kelko Quaker Chemical, S.A. (“Kelko Venezuela”), changed its functional currency from the bolivar fuerte (“BsF”) to the U.S. dollar. Accordingly, all gains and losses resulting from the remeasurement of Kelko Venezuela’s monetary assets and liabilities to published exchange rates are required to be recorded directly to the Condensed Consolidated Statements of Income. During the first quarter of 2016, the Venezuela government announced changes to its foreign exchange controls, including eliminating the CADIVI, SICAD and SIMADI exchange rate mechanisms and replacing them with a dual exchange rate system, which consists of a protected DIPRO exchange rate, with a rate fixed at 10 BsF per U.S. dollars and, also, a floating exchange rate known as the DICOM. The DIPRO rate is only available for payment of certain imports of essential goods in the food and health sectors while the DICOM governs all other transactions not covered by the DIPRO. In light of these changes to the foreign exchange controls, during the first quarter of 2016 the Company re-assessed Kelko Venezuela’s access to U.S. dollars, the impact on the operations of Kelko Venezuela, and the impact on the Company’s equity investment and other related assets. The Company did not believe it had access to the DIPRO and, therefore, believed the DICOM to be the exchange rate system available to Kelko Venezuela, which resulted in a currency conversion charge of \$0.1 million in the first quarter of 2016. Due to ongoing economic and political instability in Venezuela, the DICOM BsF per U.S. dollar exchange rate has continued to devalue during 2017. This resulted in the Company recording a currency conversion charge of less than \$0.1 million and \$0.4 million in the three and nine months ended September 30, 2017, respectively, to write down the Company’s equity investment to the current DICOM exchange rate. These currency conversion charges were recorded through equity in net income of associated companies in the Company’s Condensed Consolidated Statement of Income for each period, respectively. As of September 30, 2017, the Company’s equity investment in Kelko Venezuela was \$0.1 million, valued at the current DICOM exchange rate of approximately 3,341 BsF per U.S. dollar.

As part of the Company’s chemical management services, certain third-party product sales to customers are managed by the Company. Where the Company acts as a principal, revenue is recognized on a gross reporting basis at the selling price negotiated with customers. Where the Company acts as an agent, such revenue is recorded using net reporting of service revenue, at the amount of the administrative fee earned by the Company for ordering the goods. Third-party products transferred under arrangements resulting in net reporting totaled \$11.2 million and \$33.0 million for the three and nine months ended September 30, 2017, respectively. Comparatively, third-party products transferred under arrangements resulting in net reporting totaled \$10.7 million and \$32.8 million for the three and nine months ended September 30, 2016, respectively.

**Note 2 – Houghton Combination**

On April 4, 2017, Quaker entered into a share purchase agreement with Gulf Houghton Lubricants, Ltd. to purchase the entire issued and outstanding share capital of Houghton International, Inc. (“Houghton”) (herein referred to as “the Combination”). The shares will be bought for aggregate purchase consideration consisting of: (i) \$172.5 million in cash; (ii) a number of shares of common stock, \$1.00 par value per share, of the Company comprising 24.5% of the common stock outstanding upon the closing of the Combination; and (iii) the Company’s assumption of Houghton’s net indebtedness as of the closing of the Combination, which was approximately \$690 million at signing. At closing, the total aggregate purchase consideration is dependent on the Company’s stock price and the level of Houghton’s indebtedness.

The Company secured \$1.15 billion in commitments from Bank of America Merrill Lynch and Deutsche Bank to fund the Combination and to provide additional liquidity, and has since replaced these commitments with a syndicated bank agreement (“the New Credit Facility”) with a group of lenders for \$1.15 billion. The New Credit Facility is contingent upon and will not be effective until the closing of the Combination. The New Credit Facility currently includes a \$400.0 million multicurrency revolver, a \$575.0

**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements - Continued**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

million USD term loan and a \$175.0 million EUR equivalent term loan, each with a five year term from the date the New Credit Facility becomes effective. The maximum amount available under the New Credit Facility can be increased by \$200.0 million at the Company's option if the lenders agree and the Company satisfies certain conditions. Borrowings under the New Credit Facility will generally bear interest at a base rate or LIBOR rate plus a margin. The Company currently estimates the annual floating rate cost will be in the 3.0% to 3.5% range based on current market interest rates. The New Credit Facility will be subject to certain financial and other covenants, including covenants that the Company's consolidated net debt to adjusted EBITDA ratio cannot exceed 4.25 to 1 and the Company's consolidated adjusted EBITDA to interest expense ratio cannot be lower than 3.0 to 1. Both the USD and EUR equivalent term loans will have quarterly principal amortization during their respective five year terms, with 5% amortization of the principal balance due in years 1 and 2, 7.5% in year 3, and 10% in years 4 and 5, with the remaining principal amounts due at maturity. Until closing, the Company will only incur certain interest costs paid to maintain the banks' committed capital ("ticking fees"), which began to accrue on September 29, 2017. The ticking fees will bear an interest rate of 0.30% per annum.

In addition, the issuance of the Company's shares at closing of the Combination was subject to approval by Quaker's shareholders under the rules of the New York Stock Exchange, and approval was received at a meeting of the Company's shareholders during the third quarter of 2017. Also, the Combination is subject to regulatory approval in the United States, Europe, China and Australia. The Company received regulatory approval from China in July 2017 and from Australia in October 2017. Depending on the remaining regulatory approvals and other customary terms and conditions set forth in the share purchase agreement, the Company currently estimates closing of the Combination to occur either late in the fourth quarter of 2017 or the first quarter of 2018.

The Company incurred costs of \$9.7 million and \$23.1 million during the three and nine months ending September 30, 2017, respectively, and \$1.2 million during the three and nine months ending September 30, 2016, respectively, for certain legal, environmental, financial, and other advisory and consultant costs related to due diligence, regulatory and shareholder approvals as well as integration planning associated with the Combination. As of September 30, 2017 and December 31, 2016, the Company had current liabilities related to the Combination of \$11.4 million and \$0.5 million, respectively, primarily recorded within other current liabilities on its Condensed Consolidated Balance Sheets. In addition, the Company has made certain reclassifications to prior year disclosures regarding combination-related items to conform with the current period presentation.

**Note 3 – Recently Issued Accounting Standards**

The Financial Accounting Standards Board ("FASB") issued an accounting standard update in August 2017 to increase transparency of the economics related to risk management activities within the financial statements and enhance transparency and understandability of hedge results. This accounting standard update eliminates the requirement to separately measure and report hedge ineffectiveness and requires the entire change in the fair value of a hedging instrument to be presented in the same income statement line as the hedged item. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2018. All transition requirements and elections should be applied to hedging relationships existing on the date of adoption. For cash flow and net investment hedges existing at the date of adoption, the Company should apply a cumulative-effect adjustment related to eliminating the separate measurement of ineffectiveness to accumulated other comprehensive income with a corresponding adjustment to the opening balance of retained earnings as of the beginning of the fiscal year that the Company adopts. The amended presentation and disclosure guidance is required only prospectively. Early adoption is permitted including adoption in any interim period for which financial statements have not been issued or made available for issuance. The Company does not currently use any derivative instruments designated as hedges, but may choose to in the future. The Company has not early adopted the guidance and will evaluate the potential impact of this guidance on future transactions, as applicable.

The FASB issued an accounting standard update in May 2017 to clarify when changes to the terms or conditions of a share-based payment award must be accounted for as modifications. This accounting standard update will reduce diversity in practice and result in fewer changes to the terms of an award being accounted for as modifications. This accounting standard update will allow companies to make certain changes to awards without accounting for them as modifications and an entity is not required to estimate the value of the award immediately before and after the change if the change doesn't affect any of the inputs to the model used to value the award. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2017. The guidance within this accounting standard update should be applied prospectively to awards modified on or after the adoption date. Early adoption is permitted including adoption in any interim period for which financial statements have not been issued or made available for issuance. During the second quarter of 2017, the Company elected to early adopt this guidance with no impact to its financial statements.

The FASB issued an accounting standard update in March 2017 to improve the presentation of net periodic pension and postretirement benefit cost. Defined benefit pension and postretirement benefit costs ("net benefit cost") comprise several components that reflect different aspects of an employer's financial arrangements as well as the cost of benefits provided to employees. This accounting standard update requires that an employer disaggregate the service cost component from the other components of net benefit cost, provides explicit guidance on how to present the service cost component and the other components of



**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements - Continued**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

net benefit cost in the income statement and allows only the service cost component of net benefit cost to be eligible for capitalization. The guidance within this accounting standard update should be applied retrospectively for the presentation of the service cost component and the other components of net periodic benefit cost in the income statement and prospectively for the capitalization of the service cost component of net periodic benefit in assets. This accounting standard update is effective for annual periods beginning after December 15, 2017, including interim periods within those annual periods. Early adoption is permitted as of the beginning of an annual period for which financial statements (interim or annual) have not been issued or made available for issuance. During the first quarter of 2017, the Company elected to early adopt the guidance within this accounting standard update, including the use of a practical expedient which allows the Company to use amounts previously disclosed in its pension and other postretirement benefits note for the prior period as the estimation basis for applying the required retrospective presentation. Adoption of this guidance resulted in a reclassification to the Company's Condensed Consolidated Statement of Income for the three and nine months ended September 30, 2016, as previously reported cost of goods sold ("COGS") were reduced by \$0.1 and \$0.4 million, respectively, and selling, general and administrative expenses ("SG&A") were reduced by \$0.4 million and \$1.3 million, respectively, with a corresponding increase to other expense, net, of \$0.5 million and \$1.7 million, respectively. In addition, these required retrospective reclassifications resulted in an immaterial adjustment to previously reported direct operating earnings within the Company's reportable operating segment disclosures for the three and nine months ended September 30, 2016, respectively. See Note 4, Note 7 and Note 8 of Notes to Condensed Consolidated Financial Statements.

The FASB issued an accounting standard update in January 2017 simplifying the test for goodwill impairment by eliminating the Step 2 computation. The accounting standard update modifies the concept of impairment from the condition that exists when the carrying amount of goodwill exceeds its implied fair value to the condition that exists when the carrying amount of a reporting unit exceeds its fair value. The guidance removes the requirement to determine a goodwill impairment by calculating the implied fair value of goodwill by assigning the fair value of a reporting unit to all of its assets and liabilities as if that reporting unit had been acquired in a business combination. The guidance within this accounting standard update should be applied on a prospective basis, and is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Early adoption is permitted for interim or annual goodwill impairment tests performed on testing dates after January 1, 2017. During the third quarter of 2017, in connection with the Company's 2017 annual goodwill impairment test, the Company elected to early adopt this guidance with no impact to its financial statements.

The FASB issued an accounting standard update in January 2017 to clarify the definition of a business with the objective of adding guidance to assist companies with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. The amendments in this accounting standard update provide a more robust framework to use in determining when a set of assets and activities is a business. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2017. Early adoption is permitted in limited circumstances, and the amendments in this accounting standard update should be applied prospectively, with no disclosures required at transition. The Company does not currently meet the criteria for early application of the amendments and therefore has not early adopted the guidance. The Company will evaluate the potential impact of this guidance on future transactions, as applicable.

The FASB issued an accounting standard update in November 2016 requiring that the statement of cash flows explain both the change in the total cash and cash equivalents, and, also, the amounts generally described as restricted cash or restricted cash equivalents. This will require amounts generally described as restricted cash or restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning and ending amounts shown on the statement of cash flows. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2017. Early adoption is permitted and the guidance requires application using a retrospective transition method to each period presented when adopted. While permitted, the Company has not early adopted the guidance and is currently evaluating the appropriate implementation strategy. Adoption of the guidance will not have an impact on the Company's earnings or balance sheet but will result in changes to certain disclosures within the statement of cash flows, notably cash flows from investing activities.

The FASB issued an accounting standard update in August 2016 to standardize how certain transactions are classified in the statement of cash flows. Specific transactions covered by the accounting standard update include debt prepayment or debt extinguishment costs, settlement of zero-coupon debt instruments, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate and bank owned life insurance policies, distributions received from equity method investments and beneficial interest in securitization transactions. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2017. Early adoption is permitted, provided that all of the amendments are adopted in the same period. The guidance requires application using a retrospective transition method. While permitted, the Company has not early adopted the guidance and is currently evaluating the appropriate implementation strategy. Adoption of the guidance will not have an impact on the Company's earnings or balance sheet but may result in certain reclassifications on the statement of cash flows, including reclassifications between cash flows from operating activities, investing activities and financing activities, respectively.

**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements - Continued**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

The FASB issued an accounting standard update in March 2016 involving several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities, use of a forfeiture rate, and classification on the statement of cash flows. The guidance within this accounting standard update was effective for annual and interim periods beginning after December 15, 2016. When adopted, application of the guidance will vary based on each aspect of the update, including adoption under retrospective, modified retrospective or prospective approaches. Early adoption was permitted. During the first quarter of 2017, the Company adopted the guidance within the accounting standard update as required. The impact of adoption for the Company included the elimination of recording the tax effects of deductions in excess of compensation cost through equity as the guidance in this accounting standard update requires all tax effects related to share-based payments to now be recorded through the income statement. The tax effects of awards are required to be treated as discrete items in the interim reporting period in which the stock compensation-related tax benefits occur. In addition, when applying the treasury stock method for computing diluted earnings per share, there are no longer assumed proceeds from the stock compensation-related tax benefits and as a result, there are fewer shares considered to be repurchased in the calculation. This results in an assumption of more incremental shares being issued upon the exercise of share-based payment awards; therefore, equity awards will have a more dilutive effect on earnings per share. As required, the Company has applied these changes in the guidance prospectively, beginning in the first quarter of 2017. The result of these changes was a tax benefit of \$0.6 million and \$1.4 million recorded during the three and nine months ended September 30, 2017, respectively, and an immaterial number of dilutive shares added to the Company's earnings per share calculation for the three and nine months ended September 30, 2017, respectively. In addition, all tax-related cash flows resulting from share-based payments are now required to be reported as operating activities in the statement of cash flows under this new guidance. Either prospective or retrospective transition of this provision was permitted, and the Company has elected to apply the cash flow classification guidance on a prospective basis, consistent with the prospective transition for the treatment of excess tax benefits in the income statement. Lastly, the accounting standard update permitted Companies to make an accounting policy election to account for forfeitures as they occur for service condition aspects of certain share-based awards, rather than estimating forfeitures each period. While permitted, the Company has decided not to elect this accounting policy change, and instead has elected to continue utilizing a forfeiture rate assumption. Based on historical experience, the Company has assumed a forfeiture rate of 13% on certain of its nonvested stock awards. See Note 6, Note 9 and Note 10 of Notes to Condensed Consolidated Financial Statements.

The FASB issued an accounting standard update in February 2016 regarding the accounting and disclosure for leases. Specifically, the update will require entities that lease assets to recognize the assets and liabilities for the rights and obligations created by those leases on the balance sheet, in most instances. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2018, and should be applied on a modified retrospective basis for the reporting periods presented. Early adoption is permitted. The Company has not early adopted and is currently evaluating the potential impact of this guidance and an appropriate implementation strategy. The Company has begun its impact assessment, including taking an inventory of its outstanding leases globally. While the Company's evaluation of this guidance is in the early stages, the Company currently expects adoption of this guidance to have an impact on its balance sheet.

The FASB issued an accounting standard update in May 2014 regarding the accounting for and disclosure of revenue recognition. Specifically, the update outlined a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers, which will be common to both U.S. GAAP and International Financial Reporting Standards. The guidance was effective for annual and interim periods beginning after December 15, 2016, and allowed for full retrospective adoption of prior period data or a modified retrospective adoption. Early adoption was not permitted. In August 2015, the FASB issued an accounting standard update to delay the effective date of the new revenue standard by one year, or, in other words, to be effective for annual and interim periods beginning after December 15, 2017. Entities are permitted to adopt the new revenue standard early but not before the original effective date. During 2016 and 2017, the FASB issued a series of accounting standard updates to clarify and expand on the implementation guidance, including principal versus agent considerations, identification of performance obligations, licensing, other technical corrections and adding certain practical expedients. The amendments in these 2016 and 2017 updates did not change the core principles of the guidance previously issued in May 2014.

During 2016, the Company reviewed its historical accounting policies and practices to identify potential differences with the requirements of the new revenue recognition standard, as it related to the Company's contracts and sales arrangements. As of September 30, 2017, the Company has substantially completed its impact assessment for the implementation of the new revenue recognition guidance. This impact assessment and work performed to date included global and cross functional interviews and questionnaires, sales agreement and other sales document reviews, as well as technical considerations for the Company's future transactional accounting, financial reporting and disclosure requirements. The Company expects to adopt the guidance in the first quarter of 2018, as required, using a modified retrospective adoption approach applied to those contracts which will not be completed as of December 31, 2017. In addition, the Company will elect to apply certain of the permitted practical expedients within the revenue recognition guidance, including practical expedients around significant financing components, sales taxes and shipping and handling activities.

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**Notes to Condensed Consolidated Financial Statements - Continued**  
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The Company has begun preliminary considerations for how the new revenue recognition guidance may impact Houghton, as it pertains to the potential Combination. The Company anticipates using the remainder of 2017 to finalize its impact assessment and to further develop its considerations for the potential Houghton Combination. Based on information reviewed to date and the impact assessment conclusions reached so far, the Company does not expect the adoption of this revenue recognition guidance to have a material impact on its reported earnings, cash flows, or balance sheet; however, the Company does expect the adoption to increase the amount and level of disclosures concerning the Company's net sales.

**Note 4 – Business Segments**

The Company's reportable operating segments are organized by geography as follows: (i) North America, (ii) Europe, Middle East and Africa ("EMEA"), (iii) Asia/Pacific and (iv) South America. Operating earnings, excluding indirect operating expenses, for the Company's reportable operating segments is comprised of revenues less COGS and SG&A directly related to the respective region's product sales. The indirect operating expenses consist of SG&A not directly attributable to the product sales of each respective reportable operating segment. Other items not specifically identified with the Company's reportable operating segments include interest expense, interest income, license fees from non-consolidated affiliates, amortization expense and other income (expense), net.

The following table presents information about the performance of the Company's reportable operating segments for the three and nine months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Net sales				
North America	\$ 90,450	\$ 86,126	\$ 268,122	\$ 251,586
EMEA	58,775	49,825	167,209	150,582
Asia/Pacific	54,200	45,892	147,074	130,555
South America	9,493	8,585	26,605	22,697
Total net sales	\$ 212,918	\$ 190,428	\$ 609,010	\$ 555,420
Operating earnings, excluding indirect operating expenses				
North America	\$ 18,888	\$ 20,397	\$ 59,146	\$ 59,334
EMEA	8,862	8,340	26,325	25,385
Asia/Pacific	13,963	11,737	36,018	33,865
South America	965	680	2,826	703
Total operating earnings, excluding indirect operating expenses	42,678	41,154	124,315	119,287
Combination-related expenses	(9,675)	(1,157)	(23,088)	(1,157)
Nonoperating charges	(17,108)	(16,404)	(50,067)	(48,409)
Amortization expense	(1,886)	(1,730)	(5,490)	(5,319)
Consolidated operating income	14,009	21,863	45,670	64,402
Other income (expense), net	249	(10)	(1,427)	(245)
Interest expense	(793)	(758)	(2,229)	(2,226)
Interest income	762	551	1,825	1,444
Consolidated income before taxes and equity in net income of associated companies	\$ 14,227	\$ 21,646	\$ 43,839	\$ 63,375

Inter-segment revenues for the three and nine months ended September 30, 2017 were \$2.8 million and \$7.4 million for North America, \$6.2 million and \$16.0 million for EMEA, \$0.2 million and \$0.3 million for Asia/Pacific, respectively, and less than \$0.1 million for South America in both periods. Inter-segment revenues for the three and nine months ended September 30, 2016 were \$2.5 million and \$6.3 million for North America, \$5.3 million and \$13.2 million for EMEA, \$0.1 million and \$0.5 million for Asia/Pacific, respectively, and less than \$0.1 million for South America in both periods. However, all inter-segment transactions have been eliminated from each reportable operating segment's net sales and earnings for all periods presented above.

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**Notes to Condensed Consolidated Financial Statements - Continued**  
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**Note 5 – Restructuring and Related Activities**

During the fourth quarter of 2015, in response to weak economic conditions and market declines in many regions, Quaker’s management approved a global restructuring plan (the “2015 Program”) to reduce its operating costs. The 2015 Program included the re-organization of certain commercial functions, the consolidation of certain distribution, laboratory and administrative offices, and other related severance charges. The 2015 Program included provisions for the reduction of total headcount of approximately 65 employees globally. Employee separation benefits varied depending on local regulations within certain foreign countries and included severance and other benefits. The Company completed all of the remaining initiatives under the 2015 Program during the second quarter of 2017 and does not expect to incur further restructuring charges under this program.

Restructuring activity recognized by reportable operating segment in connection with the 2015 Program during the nine months ended September 30, 2017 is as follows:

	North America	EMEA	Total
Accrued restructuring as of December 31, 2016	\$ 196	\$ 474	\$ 670
Restructuring charges and adjustments	(126)	126	—
Cash payments	(70)	(605)	(675)
Currency translation adjustments	—	5	5
Accrued restructuring as of September 30, 2017	\$ —	\$ —	\$ —

**Note 6 – Stock-Based Compensation**

The Company recognized the following stock-based compensation expense in SG&A in its Condensed Consolidated Statements of Income for the three and nine months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Stock options	\$ 243	\$ 215	\$ 714	\$ 632
Nonvested stock awards and restricted stock units	717	773	2,314	2,366
Employee stock purchase plan	22	21	66	64
Non-elective and elective 401(k) matching contribution in stock	8	473	72	1,749
Director stock ownership plan	34	37	103	131
Total stock-based compensation expense	\$ 1,024	\$ 1,519	\$ 3,269	\$ 4,942

During the first quarter of 2017, the Company began matching non-elective and elective 401(k) contributions in cash rather than stock. Also, the Company’s estimated taxes payable as of September 30, 2016 was sufficient to fully recognize \$0.2 million of excess tax benefits related to stock option exercises as cash inflows from financing activities in its Condensed Consolidated Statements of Cash Flows for the nine months ended September 30, 2016.

During the first quarter of 2017, the Company granted stock options under its long-term incentive plan (“LTIP”) that are subject only to time vesting over a three-year period. For the purposes of determining the fair value of stock option awards, the Company used the Black-Scholes option pricing model and the assumptions set forth in the table below:

Number of options granted	42,477
Dividend yield	1.49 %
Expected volatility	25.52 %
Risk-free interest rate	1.67 %
Expected term (years)	4.0

The fair value of these options is amortized on a straight-line basis over the vesting period. As of September 30, 2017, unrecognized compensation expense related to options granted was \$1.5 million, to be recognized over a weighted average remaining period of 1.9 years. There were no stock options granted in the second or third quarters of 2017, respectively.

During the first nine months of 2017, the Company granted 17,315 nonvested restricted shares and 1,332 nonvested restricted stock units under its LTIP plan that are subject only to time vesting, generally over a three-year period. The fair value of these awards is based on the trading price of the Company’s common stock on the date of grant. The Company adjusts the grant date fair value of these awards for expected forfeitures based on historical experience. As of September 30, 2017, unrecognized compensation expense

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related to the nonvested restricted shares was \$2.7 million, to be recognized over a weighted average remaining period of 1.7 years, and unrecognized compensation expense related to nonvested restricted stock units was \$0.2 million, to be recognized over a weighted average remaining period of 2.0 years.

**Note 7 – Pension and Other Postretirement Benefits**

The components of net periodic benefit cost for the three and nine months ended September 30, 2017 and 2016 are as follows:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	Pension Benefits		Other Postretirement Benefits		Pension Benefits		Other Postretirement Benefits	
	2017	2016	2017	2016	2017	2016	2017	2016
Service cost	\$ 921	\$ 672	\$ 2	\$ —	\$ 2,710	\$ 2,025	\$ 6	\$ 8
Interest cost	994	1,111	36	28	3,005	3,344	108	106
Expected return on plan assets	(1,276)	(1,329)	—	—	(3,857)	(4,027)	—	—
Settlement charge	—	—	—	—	1,860	—	—	—
Actuarial loss (gain) amortization	798	769	13	(30)	2,459	2,389	40	—
Prior service cost amortization	(28)	(25)	—	—	(76)	(76)	—	—
Net periodic benefit cost	<u>\$ 1,409</u>	<u>\$ 1,198</u>	<u>\$ 51</u>	<u>\$ (2)</u>	<u>\$ 6,101</u>	<u>\$ 3,655</u>	<u>\$ 154</u>	<u>\$ 114</u>

During the second quarter of 2017, the Company's U.S. pension plan offered a cash settlement to its vested terminated participants, which allowed them to receive the value of their pension benefits as a single lump sum payment. As payments from the U.S. pension plan for this cash out offering exceeded the service and interest cost components of the U.S. pension plan expense for 2017, the Company recorded a settlement charge of approximately \$1.9 million. This settlement charge represented the immediate recognition into expense of a portion of the unrecognized loss within accumulated other comprehensive loss ("AOCI") on the balance sheet in proportion to the share of the projected benefit obligation that was settled by these payments. The gross pension benefit obligation was reduced by approximately \$4.0 million as a result of these payments. The settlement charge was recognized through other expense, net, on the Company's Condensed Consolidated Statement of Income.

**Employer Contributions**

The Company previously disclosed in its financial statements for the year ended December 31, 2016, that it expected to make minimum cash contributions of \$7.8 million to its pension plans and \$0.5 million to its other postretirement benefit plans in 2017. As of September 30, 2017, \$5.1 million and \$0.3 million of contributions have been made to the Company's pension plans and its postretirement benefit plans, respectively.

**Note 8 – Other Income (Expense), Net**

The components of other income (expense), net, for the three and nine months ended September 30, 2017 and 2016 are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
Income from third party license fees	\$ 141	\$ 264	\$ 612	\$ 713
Foreign exchange gains, net	545	149	580	463
Gain on fixed asset disposals, net	22	3	50	7
Non-income tax refunds and other related credits	130	72	748	133
Pension and postretirement benefit costs, non-service components	(537)	(524)	(3,539)	(1,736)
Other non-operating income	47	54	288	265
Other non-operating expense	(99)	(28)	(166)	(90)
Other income (expense), net	<u>\$ 249</u>	<u>\$ (10)</u>	<u>\$ (1,427)</u>	<u>\$ (245)</u>

**Note 9 – Income Taxes and Uncertain Income Tax Positions**

The Company's effective tax rate for the three months ended September 30, 2017 was 22.1% compared to 28.3% for the three months ended September 30, 2016. The Company's effective tax rate for the nine months ended September 30, 2017 was 32.5% compared to 31.0% for the nine months ended September 30, 2016. The Company's effective tax rates for the three and nine months ended September 30, 2017, respectively, include the impact of certain non-deductible Houghton combination-related expenses, as well as tax benefits for deductions in excess of compensation cost associated with stock option exercises and restricted stock vesting. There were no comparable non-deductible combination-related expenses or stock compensation-related tax benefits recorded through tax expense during the three or nine months ended September 30, 2016. The Company's effective tax rates for the three and nine months ended September 30, 2016, respectively, reflect earnings taxed at one of the Company's subsidiaries at a statutory rate of 25% while awaiting recertification of a concessionary 15% tax rate, which the Company received and recorded the full year benefit of during the fourth quarter of 2016. This concessionary tax rate was available to the Company during the three and nine months ended September 30, 2017. The Company's effective tax rates for both the three and nine months ended September 30, 2017 and September 30, 2016 include the tax benefit of changes in uncertain tax positions, which were more favorable to the effective tax rate in the prior year periods as compared to the current year.

As of September 30, 2017, the Company's cumulative liability for gross unrecognized tax benefits was \$7.0 million. As of December 31, 2016, the Company's cumulative liability for gross unrecognized tax benefits was \$6.2 million.

The Company continues to recognize interest and penalties associated with uncertain tax positions as a component of taxes on income before equity in net income of associated companies in its Condensed Consolidated Statements of Income. The Company recognized a credit of less than \$0.1 million and \$0.1 million for interest, and an expense of \$0.1 million and \$0.2 million for penalties in its Condensed Consolidated Statements of Income for the three and nine months ended September 30, 2017, respectively. The Company recognized a credit of \$0.7 million and \$0.6 million for interest and a credit of \$0.1 million and expense of \$0.2 million for penalties in its Condensed Consolidated Statements of Income for the three and nine months ended September 30, 2016, respectively. As of September 30, 2017, the Company had accrued \$0.7 million for cumulative interest and \$2.0 million for cumulative penalties in its Condensed Consolidated Balance Sheets, compared to \$0.7 million for cumulative interest and \$1.6 million for cumulative penalties accrued at December 31, 2016.

During the nine months ended September 30, 2017 and 2016, the Company recognized a decrease of \$0.8 million and \$1.5 million, respectively, in its cumulative liability for gross unrecognized tax benefits due to the expiration of the applicable statutes of limitations for certain tax years. During the nine months ended September 30, 2016, the Company recognized a decrease of \$3.6 million in its cumulative liability for gross unrecognized tax benefits due to settlements with tax authorities. There were no similar settlements during the nine months ended September 30, 2017.

The Company estimates that during the year ending December 31, 2017, it will reduce its cumulative liability for gross unrecognized tax benefits by approximately \$1.2 to \$1.3 million due to the expiration of the statute of limitations with regard to certain tax positions. This estimated reduction in the cumulative liability for unrecognized tax benefits does not consider any increase in liability for unrecognized tax benefits with regard to existing tax positions or any increase in cumulative liability for unrecognized tax benefits with regard to new tax positions for the year ending December 31, 2017.

The Company and its subsidiaries are subject to U.S. Federal income tax, as well as the income tax of various state and foreign tax jurisdictions. Tax years that remain subject to examination by major tax jurisdictions include Brazil from 2000, Italy from 2007, the Netherlands and the United Kingdom from 2011, China from 2012, Spain from 2013, the United States from 2014, and various domestic state tax jurisdictions from 2007.

As previously reported, the Italian tax authorities have assessed additional tax due from the Company's subsidiary, Quaker Italia S.r.l., relating to the tax years 2007 through 2013. The Company has filed for competent authority relief from these assessments under the Mutual Agreement Procedures of the Organization for Economic Co-Operation and Development for all years except 2007. As of September 30, 2017, the Company believes it has adequate reserves, where merited, for uncertain tax positions with respect to all of these audits.

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**Notes to Condensed Consolidated Financial Statements - Continued**  
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**Note 10 – Earnings Per Share**

The following table summarizes earnings per share calculations for the three and nine months ended September 30, 2017 and 2016:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2017	2016	2017	2016
<b>Basic earnings per common share</b>				
Net income attributable to Quaker Chemical Corporation	\$ 11,142	\$ 16,008	\$ 30,040	\$ 43,969
Less: income allocated to participating securities	(76)	(130)	(222)	(373)
Net income available to common shareholders	\$ 11,066	\$ 15,878	\$ 29,818	\$ 43,596
Basic weighted average common shares outstanding	13,217,165	13,143,884	13,196,255	13,128,996
<b>Basic earnings per common share</b>	<b>\$ 0.84</b>	<b>\$ 1.21</b>	<b>\$ 2.26</b>	<b>\$ 3.32</b>
<b>Diluted earnings per common share</b>				
Net income attributable to Quaker Chemical Corporation	\$ 11,142	\$ 16,008	\$ 30,040	\$ 43,969
Less: income allocated to participating securities	(76)	(130)	(222)	(373)
Net income available to common shareholders	\$ 11,066	\$ 15,878	\$ 29,818	\$ 43,596
Basic weighted average common shares outstanding	13,217,165	13,143,884	13,196,255	13,128,996
Effect of dilutive securities	34,528	29,960	41,818	18,829
Diluted weighted average common shares outstanding	13,251,693	13,173,844	13,238,073	13,147,825
<b>Diluted earnings per common share</b>	<b>\$ 0.83</b>	<b>\$ 1.21</b>	<b>\$ 2.25</b>	<b>\$ 3.32</b>

Certain stock options and restricted stock units are not included in the diluted earnings per share calculation since the effect would have been anti-dilutive. The calculated amount of anti-diluted shares not included were 4,300 and 4,819 for the three and nine months ended September 30, 2017, respectively, and 0 and 3,465 for the three and nine months ended September 30, 2016, respectively.

**Note 11 – Goodwill and Other Intangible Assets**

The Company has historically completed its annual goodwill impairment test as of the end of the third quarter of each year, or more frequently if triggering events indicate a possible impairment in one or more of its reporting units. The Company continually evaluates financial performance, economic conditions and other relevant developments in assessing if an interim period impairment test for one or more of its reporting units is necessary. The Company completed its annual impairment assessment as of the end of the third quarter of 2017 and no impairment charge was warranted. In addition, the Company has recorded no impairment charges in its past. Changes in the carrying amount of goodwill for the nine months ended September 30, 2017 were as follows:

	North America	EMEA	Asia/Pacific	South America	Total
Balance as of December 31, 2016	\$ 45,490	\$ 18,189	\$ 14,566	\$ 2,559	\$ 80,804
Goodwill additions	1,832	—	—	—	1,832
Currency translation adjustments	373	2,111	633	63	3,180
Balance as of September 30, 2017	<u>\$ 47,695</u>	<u>\$ 20,300</u>	<u>\$ 15,199</u>	<u>\$ 2,622</u>	<u>\$ 85,816</u>

Gross carrying amounts and accumulated amortization for definite-lived intangible assets as of September 30, 2017 and December 31, 2016 were as follows:

	Gross Carrying Amount		Accumulated Amortization	
	2017	2016	2017	2016
Customer lists and rights to sell	\$ 76,671	\$ 71,454	\$ 24,176	\$ 20,043
Trademarks, formulations and product technology	33,022	31,436	13,782	11,748
Other	6,142	6,023	5,463	5,151
Total definite-lived intangible assets	<u>\$ 115,835</u>	<u>\$ 108,913</u>	<u>\$ 43,421</u>	<u>\$ 36,942</u>

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The Company recorded \$1.9 million and \$5.5 million of amortization expense for the three and nine months ended September 30, 2017, respectively. Comparatively, the Company recorded \$1.7 million and \$5.3 million of amortization expense for the three and nine months ended September 30, 2016, respectively. Estimated annual aggregate amortization expense for the current year and subsequent five years is as follows:

For the year ended December 31, 2017	\$	7,342
For the year ended December 31, 2018		7,346
For the year ended December 31, 2019		7,243
For the year ended December 31, 2020		6,957
For the year ended December 31, 2021		6,578
For the year ended December 31, 2022		6,450

The Company has two indefinite-lived intangible assets totaling \$1.1 million for trademarks at September 30, 2017 and December 31, 2016.

**Note 12 – Debt**

The Company's primary credit facility ("the Credit Facility") is a \$300.0 million syndicated multicurrency credit agreement with a group of lenders which matures in June 2019. The maximum amount available under the Credit Facility can be increased to \$400.0 million at the Company's option if the lenders agree and the Company satisfies certain conditions. Borrowings under the Credit Facility generally bear interest at a base rate or LIBOR rate plus a margin. The Credit Facility has certain financial and other covenants, with the key financial covenant requiring that the Company's consolidated net debt to adjusted EBITDA ratio cannot exceed 3.50 to 1. As of September 30, 2017 and December 31, 2016, the Company's consolidated net debt to adjusted EBITDA ratio was below 1.0 to 1, and the Company was also in compliance with all of its other covenants. As of September 30, 2017 and December 31, 2016, the Company had total credit facility borrowings of \$54.7 million and \$47.9 million, respectively, primarily under the Credit Facility. The Company's other outstanding debt obligations as of September 30, 2017 and December 31, 2016 were primarily industrial development bonds and municipality-related loans. At September 30, 2017 and December 31, 2016, the amounts at which the Company's debt is recorded are not materially different from their fair market value.

**Note 13 – Equity**

In May 2015, the Company's Board of Directors authorized a share repurchase program for the repurchase of up to \$100.0 million of Quaker Chemical Corporation common stock (the "2015 Share Repurchase Program"). The 2015 Share Repurchase Program has no expiration date. The 2015 Share Repurchase Program provides a framework of conditions under which management can repurchase shares of the Company's common stock. These purchases may be made in the open market or in private and negotiated transactions and will be in accordance with applicable laws, rules and regulations. In connection with the 2015 Share Repurchase Program, the Company acquired 83,879 shares of common stock for \$5.9 million during the nine months ended September 30, 2016. There were no share repurchases under the 2015 Share Repurchase Program during the nine months ended September 30, 2017. The Company has elected not to hold treasury shares, and has retired the shares as they are repurchased. It is the Company's accounting policy to record the excess paid over par value as a reduction in retained earnings for all shares repurchased.

Prior to September 7, 2017, the Company's Articles of Incorporation included a time-based voting system that granted special ten-for-one-voting rights to shareholders who had beneficially owned their Quaker Chemical Corporation common stock continuously for a period of at least 36 consecutive calendar months (dating from the first day of the first full calendar month on or after the date the holder acquired beneficial ownership of such common stock) before the record date for a shareholder vote. At a meeting of the Company's shareholders on September 7, 2017, the Company's shareholders approved an amendment of the Company's Articles of Incorporation that provides that every holder of Quaker Chemical Corporation common stock will be entitled to one vote for each share of common stock of the Company going forward.



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The following tables present the changes in equity, net of tax, for the three and nine months ended September 30, 2017 and 2016:

	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
<b>Balance at June 30, 2017</b>	\$ 13,310	\$ 113,747	\$ 374,001	\$ (72,938)	\$ 11,474	\$ 439,594
Net income	—	—	11,142	—	562	11,704
Amounts reported in other comprehensive						
income (loss)	—	—	—	6,265	(153)	6,112
Dividends (\$0.355 per share)	—	—	(4,722)	—	—	(4,722)
Share issuance and equity-based						
compensation plans	(11)	(618)	—	—	—	(629)
<b>Balance at September 30, 2017</b>	<u>\$ 13,299</u>	<u>\$ 113,129</u>	<u>\$ 380,421</u>	<u>\$ (66,673)</u>	<u>\$ 11,883</u>	<u>\$ 452,059</u>
<b>Balance at June 30, 2016</b>	\$ 13,250	\$ 109,751	\$ 340,127	\$ (71,790)	\$ 8,895	\$ 400,233
Net income	—	—	16,008	—	343	16,351
Amounts reported in other comprehensive						
(loss) income	—	—	—	(237)	177	(60)
Dividends (\$0.345 per share)	—	—	(4,575)	—	—	(4,575)
Acquisition of noncontrolling interest	—	—	—	—	40	40
Share issuance and equity-based						
compensation plans	7	1,671	—	—	—	1,678
Excess tax benefit from stock option exercises	—	31	—	—	—	31
<b>Balance at September 30, 2016</b>	<u>\$ 13,257</u>	<u>\$ 111,453</u>	<u>\$ 351,560</u>	<u>\$ (72,027)</u>	<u>\$ 9,455</u>	<u>\$ 413,698</u>

	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
<b>Balance at December 31, 2016</b>	\$ 13,278	\$ 112,475	\$ 364,414	\$ (87,407)	\$ 9,846	\$ 412,606
Net income	—	—	30,040	—	1,619	31,659
Amounts reported in other comprehensive						
income	—	—	—	20,734	418	21,152
Dividends (\$1.055 per share)	—	—	(14,033)	—	—	(14,033)
Share issuance and equity-based						
compensation plans	21	654	—	—	—	675
<b>Balance at September 30, 2017</b>	<u>\$ 13,299</u>	<u>\$ 113,129</u>	<u>\$ 380,421</u>	<u>\$ (66,673)</u>	<u>\$ 11,883</u>	<u>\$ 452,059</u>
<b>Balance at December 31, 2015</b>	\$ 13,288	\$ 106,333	\$ 326,740	\$ (73,316)	\$ 8,198	\$ 381,243
Net income	—	—	43,969	—	1,131	45,100
Amounts reported in other comprehensive						
income	—	—	—	1,289	86	1,375
Repurchases of common stock	(84)	—	(5,775)	—	—	(5,859)
Dividends (\$1.01 per share)	—	—	(13,374)	—	—	(13,374)
Acquisition of noncontrolling interest	—	—	—	—	40	40
Share issuance and equity-based						
compensation plans	53	4,953	—	—	—	5,006
Excess tax benefit from stock option exercises	—	167	—	—	—	167
<b>Balance at September 30, 2016</b>	<u>\$ 13,257</u>	<u>\$ 111,453</u>	<u>\$ 351,560</u>	<u>\$ (72,027)</u>	<u>\$ 9,455</u>	<u>\$ 413,698</u>

**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements - Continued**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

The following tables show the reclassifications from and resulting balances of AOCI for the three and nine months ended September 30, 2017 and 2016:

	Currency Translation Adjustments	Defined Benefit Pension Plans	Unrealized Gain (Loss) in Available-for- Sale Securities	Total
<b>Balance at June 30, 2017</b>	\$ (40,062)	\$ (34,059)	\$ 1,183	\$ (72,938)
Other comprehensive income (loss) before reclassifications				
Amounts reclassified from AOCI	5,917	(611)	688	5,994
Current period other comprehensive income	—	784	(254)	530
Related tax amounts	5,917	173	434	6,524
Net current period other comprehensive income	—	(111)	(148)	(259)
	5,917	62	286	6,265
<b>Balance at September 30, 2017</b>	<b>\$ (34,145)</b>	<b>\$ (33,997)</b>	<b>\$ 1,469</b>	<b>\$ (66,673)</b>
<b>Balance at June 30, 2016</b>	\$ (38,812)	\$ (34,070)	\$ 1,092	\$ (71,790)
Other comprehensive (loss) income before reclassifications				
Amounts reclassified from AOCI	(892)	3	575	(314)
Current period other comprehensive (loss) income	—	713	(280)	433
Related tax amounts	(892)	716	295	119
Net current period other comprehensive (loss) income	—	(256)	(100)	(356)
	(892)	460	195	(237)
<b>Balance at September 30, 2016</b>	<b>\$ (39,704)</b>	<b>\$ (33,610)</b>	<b>\$ 1,287</b>	<b>\$ (72,027)</b>

	Currency Translation Adjustments	Defined Benefit Pension Plans	Unrealized Gain (Loss) in Available-for- Sale Securities	Total
<b>Balance at December 31, 2016</b>	\$ (52,255)	\$ (36,168)	\$ 1,016	\$ (87,407)
Other comprehensive income (loss) before reclassifications				
Amounts reclassified from AOCI	18,110	(684)	1,578	19,004
Current period other comprehensive income	—	4,284	(889)	3,395
Related tax amounts	18,110	3,600	689	22,399
Net current period other comprehensive income	—	(1,429)	(236)	(1,665)
	18,110	2,171	453	20,734
<b>Balance at September 30, 2017</b>	<b>\$ (34,145)</b>	<b>\$ (33,997)</b>	<b>\$ 1,469</b>	<b>\$ (66,673)</b>
<b>Balance at December 31, 2015</b>	\$ (38,544)	\$ (35,251)	\$ 479	\$ (73,316)
Other comprehensive (loss) income before reclassifications				
Amounts reclassified from AOCI	(1,160)	116	1,087	43
Current period other comprehensive (loss) income	—	2,313	136	2,449
Related tax amounts	(1,160)	2,429	1,223	2,492
Net current period other comprehensive (loss) income	—	(788)	(415)	(1,203)
	(1,160)	1,641	808	1,289
<b>Balance at September 30, 2016</b>	<b>\$ (39,704)</b>	<b>\$ (33,610)</b>	<b>\$ 1,287</b>	<b>\$ (72,027)</b>

Approximately 75% and 25% of the amounts reclassified from accumulated other comprehensive loss to the Condensed Consolidated Statements of Income for defined benefit retirement plans during the three and nine months ended September 30, 2017 and 2016 were recorded in SG&A and COGS, respectively. See Note 7 of Notes to Condensed Consolidated Financial Statements for further information. All reclassifications related to unrealized gain (loss) in available-for-sale securities relate to the Company's equity interest in a captive insurance company and are recorded in equity in net income of associated companies. The amounts reported in other comprehensive income for non-controlling interest are related to currency translation adjustments.

**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements - Continued**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

**Note 14 – Business Acquisitions**

In May 2017, the Company acquired assets associated with a business that markets, sells and manufactures certain metalworking fluids for its North America reportable operating segment for 7.3 million CAD, or approximately \$5.4 million. The Company allocated approximately \$3.0 million of the purchase price to intangible assets, comprised of trademarks and formulations, to be amortized over 15 years; a non-competition agreement, to be amortized over 5 years; and customer relationships, to be amortized over 10 years. In addition, the Company recorded an other current asset of approximately \$0.6 million acquired with the business, and approximately \$1.8 million of goodwill related to expected value not allocated to other acquired assets, all of which will be tax deductible.

In November 2016, the Company acquired Lubricor Inc. and its affiliated entities (“Lubricor”), a metalworking fluids manufacturer headquartered in Waterloo, Ontario for its North America reportable operating segment for 16.0 million CAD, or approximately \$12.0 million. In May 2016, the Company acquired assets of a business that is associated with dust control products for the mining industry for its North America reportable operating segment for \$1.9 million.

During the first quarter of 2017, the Company identified and recorded an adjustment to the allocation of the purchase price for the Lubricor acquisition. The adjustment was the result of finalizing a post-closing settlement based on the Company’s assessment of additional information related to assets acquired and liabilities assumed. As of September 30, 2017, the allocation of the purchase price for the Lubricor acquisition has not been finalized and the one-year measurement period has not ended. Further adjustments may be necessary as a result of the Company’s on-going assessment of additional information related to the fair value of assets acquired and liabilities assumed.

The following table presents the current allocations of the purchase price of the assets acquired and liabilities assumed in all of the Company’s acquisitions in 2016:

<b>2016 Acquisitions</b>	
Current assets (includes cash acquired)	\$ 3,443
Property, plant and equipment	2,574
Intangibles	
Customer lists and rights to sell	5,041
Trademarks, formulations and product technology	2,543
Other intangibles	127
Goodwill	3,355
Total assets purchased	<u>17,083</u>
Current liabilities	(1,198)
Other long-term liabilities	(2,019)
Total liabilities assumed	<u>(3,217)</u>
Gross cash paid for acquisitions	\$ 13,866
Less: cash acquired	105
Net cash paid for acquisitions	<u>\$ 13,761</u>

In July 2015, the Company acquired Verkol, S.A.U., a leading specialty grease and other lubricants manufacturer based in northern Spain, included in its EMEA reportable operating segment, for 37.7 million EUR, or approximately \$41.4 million. This included a post-closing adjustment of 1.3 million EUR, or approximately \$1.4 million that was accrued as of December 31, 2015 and paid during the first quarter of 2016. The purchase included cash acquired of 14.1 million EUR, or approximately \$15.4 million, and assumed long-term debt of 2.2 million EUR, or approximately \$2.4 million.

The results of operations of the acquired businesses and assets are included in the Condensed Consolidated Statements of Income from their respective acquisition dates. Transaction expenses associated with these acquisitions are included in SG&A in the Company’s Condensed Consolidated Statements of Income. Certain pro forma and other information are not presented, as the operations of the acquired businesses are not material to the overall operations of the Company for the periods presented.

**Quaker Chemical Corporation**  
**Notes to Condensed Consolidated Financial Statements - Continued**  
*(Dollars in thousands, except share and per share amounts, unless otherwise stated)*  
*(Unaudited)*

**Note 15 – Fair Value Measurements**

The Company has valued its company-owned life insurance policies at fair value. These assets are subject to fair value measurement as follows:

Assets	Total Fair Value	Fair Value Measurements at September 30, 2017 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
Company-owned life insurance	\$ 1,533	\$ —	\$ 1,533	\$ —
Total	\$ 1,533	\$ —	\$ 1,533	\$ —

Assets	Total Fair Value	Fair Value Measurements at December 31, 2016 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
Company-owned life insurance	\$ 1,410	\$ —	\$ 1,410	\$ —
Total	\$ 1,410	\$ —	\$ 1,410	\$ —

The fair values of Company-owned life insurance assets are based on quotes for like instruments with similar credit ratings and terms. The Company did not hold any Level 3 investments as of September 30, 2017 or December 31, 2016, respectively, so related disclosures have not been included.

**Note 16 – Commitments and Contingencies**

The Company previously disclosed in its Annual Report filed on Form 10-K for the year ended December 31, 2016 that AC Products, Inc. (“ACP”), a wholly owned subsidiary, has been operating a groundwater treatment system to hydraulically contain groundwater contamination emanating from ACP’s site, the principal contaminant of which is perchloroethylene (“PERC”). As of September 30, 2017, ACP believes it is close to meeting the conditions for closure of the groundwater treatment system, but continues to operate this system while in discussions with the relevant authorities. As of September 30, 2017, the Company believes that the range of potential-known liabilities associated with the balance of the ACP water remediation program is approximately \$0.1 million to \$1.0 million. The low and high ends of the range are based on the length of operation of the treatment system as determined by groundwater modeling. Costs of operation include the operation and maintenance of the extraction well, groundwater monitoring and program management.

The Company previously disclosed in its Annual Report filed on Form 10-K for the year ended December 31, 2016 that an inactive subsidiary of the Company that was acquired in 1978 sold certain products containing asbestos, primarily on an installed basis, and is among the defendants in numerous lawsuits alleging injury due to exposure to asbestos. During the nine months ended September 30, 2017, there have been no significant changes to the facts or circumstances of this matter previously disclosed, aside from on-going claims and routine payments associated with this litigation. Based on a continued analysis of the existing and anticipated future claims against this subsidiary, it is currently projected that the subsidiary’s total liability over the next 50 years for these claims is approximately \$2.2 million (excluding costs of defense).

The Company believes, although there can be no assurance regarding the outcome of other unrelated environmental matters, that it has made adequate accruals for costs associated with other environmental problems of which it is aware. Approximately \$0.2 million was accrued at September 30, 2017 and December 31, 2016, respectively, to provide for such anticipated future environmental assessments and remediation costs. The Company is party to other litigation which management currently believes will not have a material adverse effect on the Company’s results of operations, cash flows or financial condition.

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

*Executive Summary*

Quaker Chemical Corporation is a leading global provider of process fluids, chemical specialties, and technical expertise to a wide range of industries, including steel, aluminum, automotive, mining, aerospace, tube and pipe, cans, and others. For nearly 100 years, Quaker has helped customers around the world achieve production efficiency, improve product quality, and lower costs through a combination of innovative technology, process knowledge, and customized services. Headquartered in Conshohocken, Pennsylvania USA, Quaker serves businesses worldwide with a network of dedicated and experienced professionals whose mission is to make a difference.

The Company had a solid operating performance in the third quarter of 2017, as strong volume growth and continued discipline in managing its selling, general and administrative expenses ("SG&A") largely offset a decline in gross margin compared to the prior year. Specifically, net sales increased 12% to \$212.9 million in the third quarter of 2017 compared to \$190.4 million in the third quarter of 2016 driven by a 7% growth in volumes, including acquisitions, a 3% increase due to changes in price and product mix and a 2% positive impact from foreign currency translation. Driven by the strong volume levels, the Company's gross profit increased 5% quarter-over-quarter, despite a decline in gross margin to 35.1% in the third quarter of 2017 compared to 37.2% in the third quarter of 2016. The decrease in the Company's gross margin was primarily due to higher raw material costs compared to the prior year and a change in the mix of products sold. In addition, the current quarter's operating income benefited from the Company's ability to significantly grow its net sales while only slightly increasing its SG&A. During the third quarter of 2017, the Company incurred \$9.7 million, or \$0.52 per diluted share, of costs associated with the Company's previously announced combination with Houghton International, Inc. ("Houghton") (herein referred to as "the Combination"). The Company incurred \$1.2 million, or \$0.08 per diluted share, of similar combination-related costs in the third quarter of 2016. Including these combination-related expenses, the Company's third quarter of 2017 net income and earnings per diluted share were \$11.1 million and \$0.83, respectively, compared to \$16.0 million and \$1.21 per diluted share, respectively, in the third quarter of 2016. Excluding these costs and other non-core items, coupled with a lower current quarter effective tax rate, the Company's non-GAAP earnings per diluted share increased 6% to \$1.32 in the third quarter of 2017 compared to \$1.25 in the prior year. The Company's adjusted EBITDA was \$29.4 million in the third quarter of 2017, an increase of 4% compared to \$28.3 million in the prior year.

From a regional perspective, the Company's third quarter of 2017 operating performance was highlighted by strong volume growth and market share gains in three of its four regions which was partially offset by declining gross margins in the Company's three largest regions. The Company's Europe, Middle East and Africa ("EMEA") region increased its operating earnings due to strong net sales growth on higher sales volumes and price and product mix, coupled with a relatively consistent level of SG&A, largely offset by lower gross margin quarter-over-quarter. In the Company's Asia/Pacific region, operating earnings increased quarter-over-quarter as an increase in sales volumes and relatively consistent SG&A was partially offset by a slight decline in gross margin. In South America, the Company continued its positive results and was able to grow profitability through higher sales volumes, increases from price and product mix and an overall increase in gross margin, on relatively consistent levels of SG&A. The Company's North American region experienced a decline in its operating earnings as contributions from the Company's 2016 acquisition of Lubricor Inc. ("Lubricor") and increases from price and product mix were more than offset by a decline in gross margin and slightly higher SG&A. See the Reportable Operating Segments Review, in the Operations section of this Item, below.

The Company generated net operating cash flow of \$20.0 million in the third quarter of 2017, increasing its year-to-date net operating cash flow to \$40.8 million compared to \$53.0 million in the first nine months of 2016. The decrease in net operating cash flow year-over-year was primarily due to cash outflows related to certain Houghton combination-related expenses and higher levels of cash invested in the Company's working capital during 2017 as a result of the Company's strong volume growth. The key drivers of the Company's operating cash flow and working capital are further discussed in the Company's Liquidity and Capital Resources section of this Item, below.

Overall, the Company is pleased with another solid quarter. Specifically, the Company was able to grow organic volumes by 5% on continued market share gains and increased production in some of the Company's end markets. Also, the Company continued its disciplined approach to managing SG&A which helped offset a decline in its gross margin in the third quarter of 2017. While the combination-related expenses incurred in the third quarter of 2017 led to a decrease in reported net income quarter-over-quarter, excluding these costs and other non-core items, the Company's operating performance resulted in a 4% increase in its adjusted EBITDA quarter-over-quarter, and coupled with a lower effective tax rate in the current period, drove a 6% increase in its non-GAAP earnings per diluted share compared to the third quarter of 2016. Looking forward to the remainder of 2017 and into the early part of 2018, the Company believes its strong volumes will continue and is optimistic that its gross margin will begin to gradually rise and head back to its 37% target. The Company expects that market share gains, on-going discipline in managing SG&A and the benefits of past acquisitions will continue to help offset its gross margin and other market challenges. Overall, the Company remains confident in its future and still expects 2017 to be another good year for Quaker, as the Company continues to expect growth in net sales year-over-year, and increases in adjusted EBITDA and non-GAAP earnings per share for the eighth consecutive year.

Related to the Houghton Combination, the Company received shareholder approval at a meeting held in September 2017 and also received regulatory approval from China in July 2017 and from Australia in October 2017. The closing of the Combination is still subject to regulatory approval in the U.S. and Europe and other customary closing conditions. The Company continues to expect closing of the Combination to occur either late in the fourth quarter of 2017 or during the first quarter of 2018.

#### *Liquidity and Capital Resources*

Quaker's cash and cash equivalents increased to \$109.1 million at September 30, 2017 from \$88.8 million at December 31, 2016. The \$20.3 million increase was the net result of \$40.8 million of cash provided by operating activities and a \$4.8 million positive impact due to the effect of foreign exchange rates on cash, partially offset by \$12.8 million of cash used in investing activities and \$12.5 million of cash used in financing activities.

Net cash provided by operating activities was \$40.8 million in the first nine months of 2017 compared to \$53.0 million in the first nine months of 2016. The \$12.2 million decrease was primarily the result of cash outflows of \$12.7 million in the current year associated with payments related to the Combination, described below. There were no similar cash payments in the nine months ended September 30, 2016. In addition, the Company had higher cash invested in working capital, primarily due to higher sales and production volumes in the current quarter. Specifically, the increase in net sales quarter-over-quarter drove higher levels of accounts receivables and the Company re-stocked inventories that were seasonally low at year end. In addition, the Company had higher cash outflows due to its prepaid taxes, which increased due to improved results and timing of payments. These operating cash outflows during the nine months ended September 30, 2017 were partially offset by the Company's improved operating performance year-over-year, benefits from lower pension-related funding due to timing of contributions and lower restructuring payments made as part of the Company's global restructuring program initiated in the fourth quarter of 2015, described below.

Net cash used in investing activities increased from \$8.7 million in the first nine months of 2016 to \$12.8 million in the first nine months of 2017, primarily due to higher payments for acquisitions and capital expenditures. During the first nine months of 2017, the Company had cash outflows of \$5.4 million for the acquisition of assets associated with a business that markets, sells and manufactures certain metalworking fluids, whereas during the first nine months of 2016, the Company had cash outflows of \$3.2 million due to a post-closing adjustment to finalize its acquisition of Verkol, S.A.U. In addition, the Company had higher additions to property, plant and equipment during the first nine months of 2017 as compared to the first nine months of 2016, primarily due to timing of expenditures for several small projects across all of its regions. Changes in the Company's restricted cash, which is dependent upon the timing of claims and payments associated with a subsidiary's asbestos litigation, were relatively consistent year-over-year.

Net cash used in financing activities was \$12.5 million in the first nine months of 2017 compared to \$25.5 million in the first nine months of 2016. The \$13.0 million decrease was primarily due to proceeds from long-term debt, net of repayments, of \$4.0 million in the first nine months of 2017 compared to net repayments of long-term debt of \$6.8 million in the first nine months of 2016. The current year proceeds from long-term debt coupled with cash on hand were primarily used to finance the higher cash payments for acquisitions year-over-year and cash payments associated with combination-related expenses, described below. In addition, the Company paid \$13.9 million in cash dividends during the first nine months of 2017, a \$0.8 million increase in cash dividends compared to the prior year period. In the first nine months of 2016, the Company completed \$5.9 million in share repurchases, with no comparable cash payments during the current year.

The Company's primary credit facility ("the Credit Facility") is a \$300.0 million syndicated multicurrency credit agreement with a group of lenders which matures in June 2019. The maximum amount available under the Credit Facility can be increased to \$400.0 million at the Company's option if the lenders agree and the Company satisfies certain conditions. Borrowings under the Credit Facility generally bear interest at a base rate or LIBOR rate plus a margin. The Credit Facility has certain financial and other covenants, with the key financial covenant requiring that the Company's consolidated net debt to adjusted EBITDA ratio cannot exceed 3.50 to 1. As of September 30, 2017 and December 31, 2016, the Company's consolidated net debt to adjusted EBITDA ratio was below 1.0 to 1, and the Company was also in compliance with all of its other covenants. As of September 30, 2017 and December 31, 2016, the Company had total credit facility borrowings of \$54.7 million and \$47.9 million, respectively, primarily under the Credit Facility. The Company's other debt obligations as of September 30, 2017 and December 31, 2016 were primarily industrial development bonds and municipality-related loans.

Quaker's management approved a global restructuring plan in the fourth quarter of 2015 (the "2015 Program") to reduce its operating costs. The Company substantially completed all of the initiatives under the 2015 Program during 2016 and settlement of these charges primarily occurred in 2016, with only minimal settlements and cash payments remaining after 2016, which were completed during the first half of 2017. During the first nine months of 2017 and 2016, the Company utilized \$0.7 million and \$4.2 million, respectively, of operating cash flow for the settlement of certain restructuring liabilities under the 2015 Program. The Company still projects full year pre-tax cost savings as a result of this program to approximate \$5 million in 2017 compared to approximately half of this amount realized during 2016.

On April 4, 2017, Quaker entered into a share purchase agreement with Gulf Houghton Lubricants, Ltd. to purchase the entire issued and outstanding share capital of Houghton. The shares will be bought for aggregate purchase consideration consisting of: (i) \$172.5 million in cash; (ii) a number of shares of common stock, \$1.00 par value per share, of the Company comprising 24.5% of the common stock outstanding upon the closing of the Combination; and (iii) the Company's assumption of Houghton's net indebtedness as of the closing of the Combination, which was approximately \$690 million at signing. See Note 2 of Notes to Condensed Consolidated Financial Statements.

In connection with the Combination, the Company secured \$1.15 billion in commitments from Bank of America Merrill Lynch and Deutsche Bank to fund the purchase consideration and provide additional liquidity and has since replaced these commitments with a syndicated bank agreement ("the New Credit Facility") with a group of lenders for \$1.15 billion. The New Credit Facility is contingent upon and will not be effective until the closing of the Combination. The New Credit Facility currently includes a \$400.0 million multicurrency revolver, a \$575.0 million USD term loan and a \$175.0 million EUR equivalent term loan, each with a five year term from the date the New Credit Facility becomes effective. The maximum amount available under the New Credit Facility can be increased by \$200.0 million at the Company's option if the lenders agree and the Company satisfies certain conditions. Borrowings under the New Credit Facility will generally bear interest at a base rate or LIBOR rate plus a margin, and the Company currently estimates the annual floating rate cost will be in the 3.0% to 3.5% range based on current market interest rates. The New Credit Facility will be subject to certain financial and other covenants, including covenants that the Company's consolidated net debt to adjusted EBITDA ratio cannot exceed 4.25 to 1 and the Company's consolidated adjusted EBITDA to interest expense ratio cannot be lower than 3.0 to 1. Both the USD and EUR equivalent term loans will have quarterly principal amortization during their respective five year terms, with 5% amortization of the principal balance due in years 1 and 2, 7.5% in year 3, and 10% in years 4 and 5, with the remaining principal amounts due at maturity. Until closing, the Company will only incur certain interest costs paid to maintain the banks' committed capital ("ticking fees"), which began to accrue on September 29, 2017. The ticking fees will bear an interest rate of 0.30% per annum.

The Company incurred \$23.1 million of combination-related expenses during the first nine months of 2017, described in the Non-GAAP measures section of this Item, below, and made cash payments of \$12.7 million related to these costs. Assuming an early 2018 closing, the Company currently estimates it will incur approximately \$5 to \$10 million of additional combination-related expenses and make comparable associated cash payments during the fourth quarter of 2017, which primarily relate to integration planning and regulatory approvals associated with the Combination. The Company received regulatory approval from China in July 2017 and from Australia in October 2017. In addition, at a shareholder meeting during the third quarter of 2017, the Company's shareholders approved the issuance of the new shares of the Company's common stock at closing of the Combination. Currently, the closing of the Combination is expected by the end of 2017 or early 2018, and is contingent upon customary closing conditions and the remaining regulatory approvals in the United States and Europe. Given these contingencies and the overall timing of the Combination, the Company has not recorded any estimated costs for additional expenses that the Company expects, but had yet to incur as of September 30, 2017, related to the Combination.

In addition to approving the issuance of the Company's shares at closing of the Combination, noted above, at the same third quarter of 2017 shareholders meeting, the Company's shareholders approved an amendment of the Company's Articles of Incorporation that provides that every holder of Quaker Chemical Corporation common stock will be entitled to one vote for each share of common stock of the Company going forward. Prior to this amendment, the Company's Articles of Incorporation included a time-based voting system that granted special ten-for-one-voting rights to shareholders who had beneficially owned their Quaker Chemical Corporation common stock continuously for a period of at least 36 consecutive calendar months.

As of September 30, 2017, the Company's gross liability for uncertain tax positions, including interest and penalties, was \$9.7 million. The Company cannot determine a reliable estimate of the timing of cash flows by period related to its uncertain tax position liability. However, should the entire liability be paid, the amount of the payment may be reduced by up to \$5.3 million as a result of offsetting benefits in other tax jurisdictions.

The Company believes it is capable of supporting its operating requirements and funding its business objectives, including but not limited to, payments of dividends to shareholders, costs related to the Combination, pension plan contributions, capital expenditures, other business opportunities and other potential contingencies, through internally generated funds supplemented with debt or equity as needed.

#### *Critical Accounting Policies*

The Company's critical accounting policies set forth in its Annual Report on Form 10-K for the year ended December 31, 2016 remain materially consistent. However, the Company completed its annual goodwill impairment assessment during the third quarter of 2017. Based on this assessment, the following is an update to the Company's related critical accounting policy:

Goodwill and other intangible assets — The Company accounts for business combinations under the acquisition method of accounting. This method requires the recording of acquired assets, including separately identifiable intangible assets, at their acquisition date fair values. Any excess of the purchase price over the estimated fair value of the identifiable net assets acquired is

**Quaker Chemical Corporation**  
**Management's Discussion and Analysis**

recorded as goodwill. The determination of the estimated fair value of assets acquired requires management's judgment and often involves the use of significant estimates and assumptions, including assumptions with respect to future cash inflows and outflows, discount rates, royalty rates, asset lives and market multiples, among other items. When necessary, the Company consults with external advisors to help determine fair value. For non-observable market values, the Company may determine fair value using acceptable valuation principles, including the excess earnings, relief from royalty, lost profit or cost methods.

The Company amortizes definite-lived intangible assets on a straight-line basis over their useful lives. Goodwill and intangible assets which have indefinite lives are not amortized and are required to be assessed at least annually for impairment. The Company compares the assets' fair value to their carrying value, primarily based on future discounted cash flows, in order to determine if an impairment charge is warranted. The estimates of future cash flows involve considerable management judgment and are based upon assumptions about expected future operating performance. Assumptions used in these forecasts are consistent with internal planning, but the actual cash flows could differ from management's estimates due to changes in business conditions, operating performance, and economic conditions.

The Company completed its annual impairment assessment as of the end of the third quarter of 2017 by performing a qualitative ("step 0") assessment. Based on the assessment performed, the Company concluded that there was no evidence of events or circumstances that would indicate a material change from the Company's prior year quantitative assessment by reporting unit. Therefore, the Company has concluded that no goodwill impairment exists in any of its reporting units as of September 30, 2017.

**Non-GAAP Measures**

Included in this Form 10-Q filing are two non-GAAP (unaudited) financial measures: non-GAAP earnings per diluted share and adjusted EBITDA. The Company believes these non-GAAP financial measures provide meaningful supplemental information as they enhance a reader's understanding of the financial performance of the Company, are more indicative of future operating performance of the Company, and facilitate a better comparison among fiscal periods, as the non-GAAP financial measures exclude items that are not considered core to the Company's operations. Non-GAAP results are presented for supplemental informational purposes only and should not be considered a substitute for the financial information presented in accordance with GAAP.

The following tables reconcile non-GAAP earnings per diluted share (unaudited) and adjusted EBITDA (unaudited) to their most directly comparable GAAP (unaudited) financial measures:

	<b>Three Months Ended</b>		<b>Nine Months Ended</b>	
	<b>September 30,</b>		<b>September 30,</b>	
	<b>2017</b>	<b>2016</b>	<b>2017</b>	<b>2016</b>
<b>GAAP earnings per diluted share attributable to Quaker Chemical Corporation</b>				
common shareholders	\$ 0.83	\$ 1.21	\$ 2.25	\$ 3.32
Equity income in a captive insurance company per diluted share (a)	(0.03)	(0.04)	(0.11)	(0.07)
Houghton combination-related expenses per diluted share (b)	0.52	0.08	1.47	0.08
U.S. pension plan settlement charge per diluted share (c)	—	—	0.09	—
Cost streamlining initiative per diluted share (d)	—	—	0.01	—
Currency conversion impacts of the Venezuelan bolivar fuerte per diluted share (e)	0.00	—	0.03	0.01
<b>Non-GAAP earnings per diluted share</b>	<b>\$ 1.32</b>	<b>\$ 1.25</b>	<b>\$ 3.74</b>	<b>\$ 3.34</b>

	<b>Three Months Ended</b>		<b>Nine Months Ended</b>	
	<b>September 30,</b>		<b>September 30,</b>	
	<b>2017</b>	<b>2016</b>	<b>2017</b>	<b>2016</b>
<b>Net income attributable to Quaker Chemical Corporation</b>	<b>\$ 11,142</b>	<b>\$ 16,008</b>	<b>\$ 30,040</b>	<b>\$ 43,969</b>
Depreciation and amortization	5,017	4,868	14,954	14,788
Interest expense	793	758	2,229	2,226
Taxes on income before equity in net income of associated companies	3,140	6,121	14,229	19,664
Equity income in a captive insurance company (a)	(400)	(597)	(1,427)	(952)
Houghton combination-related expenses (b)	9,675	1,157	23,088	1,157
U.S. pension plan settlement charge (c)	—	—	1,860	—
Cost streamlining initiative (d)	—	—	286	—
Currency conversion impacts of the Venezuelan bolivar fuerte (e)	35	—	375	88
<b>Adjusted EBITDA</b>	<b>\$ 29,402</b>	<b>\$ 28,315</b>	<b>\$ 85,634</b>	<b>\$ 80,940</b>
<b>Adjusted EBITDA margin (%) (f)</b>	<b>13.8%</b>	<b>14.9%</b>	<b>14.1%</b>	<b>14.6%</b>



- (a) Equity income in a captive insurance company represents the after tax income attributable to the Company's interest in Primex, Ltd. ("Primex"), a captive insurance company. The Company holds a 33% investment in and has significant influence over Primex, and therefore accounts for this interest under the equity method of accounting. The income attributable to Primex is not considered core to the Company's operations.
- (b) Houghton combination-related expenses include certain legal, environmental, financial, and other advisory and consultant costs incurred in connection with the strategic evaluation of, diligence on, and execution of the definitive agreement to combine with Houghton, as well as regulatory and shareholder approvals and integration planning associated with the Combination. These costs are not indicative of the future operating performance of the Company. In addition, certain of these costs were considered non-deductible for the purpose of determining the Company's effective tax rate and, therefore, the earnings per diluted share amount reflects this impact.
- (c) U.S. pension plan settlement charge represents the expense recorded related to the Company's U.S. pension plan cash settlement to its vested terminated participants. This settlement charge represents the immediate recognition into expense of a portion of the unrecognized loss within accumulated other comprehensive loss ("AOCI") on the balance sheet in proportion to the share of the projected benefit obligation that was settled by these payments. This charge was the result of a specific one-time event and is not indicative of the future operating performance of the Company.
- (d) Cost streamlining initiative represents expenses associated with certain actions taken to reorganize the Company's corporate staff. Overall, these costs are non-core and are indirect operating expenses that are not attributable to the product sales of any respective reportable operating segment, and, therefore, are not indicative of the future operating performance of the Company.
- (e) Currency conversion impacts of the Venezuelan bolivar fuerte represent after tax losses incurred at the Company's Venezuelan affiliate as a result of changes in Venezuela's foreign exchange markets and controls and the conversion of bolivar fuerte to U.S. dollars. The losses were the result of changes to Venezuela's market and foreign exchange controls and are not indicative of the future operating performance of the Company.
- (f) The Company calculates Adjusted EBITDA margin as the percentage of Adjusted EBITDA into consolidated net sales.

*Operations*

***Consolidated Operations Review – Comparison of the Third Quarter of 2017 with the Third Quarter of 2016***

Net sales in the third quarter of 2017 of \$212.9 million increased 12% from \$190.4 million in the third quarter of 2016. The \$22.5 million increase in net sales was driven by a 5% increase in organic volumes, a 2%, or \$2.9 million increase from sales primarily attributable to the Company's fourth quarter of 2016 acquisition of Lubricor, a 3% increase due to changes in price and product mix and the positive impact of foreign currency translation of \$3.8 million, or 2%.

Costs of goods sold ("COGS") in the third quarter of 2017 of \$138.1 million increased 16% from \$119.5 million in the third quarter of 2016. The increase in COGS was primarily due to the increase in product volumes, noted above, as well as additional COGS attributed to the Company's 2016 acquisition of Lubricor, the impact of certain raw material cost increases, changes in product mix and the negative impact of foreign currency translation quarter-over-quarter. In addition, the third quarters of 2017 and 2016 COGS include reclassifications related to the Company's first quarter of 2017 adoption and retrospective application of an accounting standard update regarding the classification of certain pension costs on the income statement. See Note 3 of Notes to Condensed Consolidated Financial Statements.

Gross profit in the third quarter of 2017 increased \$3.9 million, or 5%, from the third quarter of 2016. The increase in gross profit was primarily due to the increase in sales volumes, noted above, largely offset by a lower gross margin of 35.1% in the third quarter of 2017 compared to 37.2% in the third quarter of 2016. The decrease in the Company's gross margin quarter-over-quarter was primarily due to higher raw material costs compared to the prior year quarter and a change in the mix of certain products sold.

SG&A in the third quarter of 2017 increased \$3.2 million compared to the third quarter of 2016 due to the net impact of several factors. Specifically, the Company's SG&A increased as a result of higher labor-related costs, primarily due to annual compensation increases and the timing of certain incentive compensation accruals, and additional SG&A associated with the Company's 2016 Lubricor acquisition, as well as increases due to foreign currency translation. These were partially offset by decreases to SG&A as a result of certain cost savings efforts, including the 2015 global restructuring program. In addition, the third quarters of 2017 and 2016 SG&A includes reclassifications related to the Company's first quarter of 2017 adoption of the pension accounting standard update, noted above.

During the third quarter of 2017, the Company incurred \$9.7 million of costs related to its previously announced combination with Houghton, described in the Non-GAAP measures section of this Item, above. The Company incurred \$1.2 million of similar combination-related expenses in the third quarter of 2016.

Operating income in the third quarter of 2017 was \$14.0 million compared to \$21.9 million in the third quarter of 2016. The decrease in operating income was primarily due to higher combination-related expenses along with slightly higher levels of SG&A not related to the Houghton combination, which more than offset gross profit increases on strong volume growth, noted above.

Other income (expense), net, increased \$0.3 million quarter-over-quarter primarily due to higher foreign currency transaction gains realized in the third quarter of 2017 compared to the third quarter of 2016. In addition, the third quarters of 2017 and 2016 other income (expense), net, includes reclassifications related to the Company's first quarter of 2017 adoption of the pension accounting standard update, noted above.

The Company had a relatively consistent level of interest expense in both the third quarters of 2017 and 2016, respectively. Interest income increased \$0.2 million quarter-over-quarter primarily due to an increase in the level of the Company's invested cash in certain regions with higher returns.

The Company's effective tax rates for the third quarters of 2017 and 2016 were 22.1% and 28.3%, respectively. The Company's relatively low third quarter of 2017 effective tax rate was primarily driven by a tax benefit for deductions in excess of compensation cost associated with stock option exercises and restricted stock vesting in the current quarter as a result of the Company's first quarter of 2017 adoption of an accounting standard update regarding the tax impact of certain stock-based compensation. See Note 3 of Notes to Condensed Consolidated Financial Statements. There were no comparable stock compensation-related tax benefits during the third quarter of 2016. Comparatively, the third quarter of 2016 effective tax rate was elevated, as it reflected earnings taxed at one of the Company's subsidiaries at a statutory rate of 25% while awaiting recertification of a concessionary 15% tax rate, which the Company received and recorded the full year benefit of during the fourth quarter of 2016. This concessionary tax rate was available to the Company throughout 2017. Both the third quarters of 2017 and 2016 effective tax rates included the tax benefit of changes in uncertain tax positions, which were more favorable to the effective tax rate in the prior year quarter as compared to the current quarter.

Equity in net income of associated companies ("equity income") decreased \$0.2 million quarter-over-quarter, primarily due to the lower earnings from the Company's interest in a captive insurance company in the current quarter. In addition, the Company recorded an immaterial currency conversion charge in the third quarter of 2017 associated with the Company's Venezuela affiliate due to the on-going devaluation of the Venezuelan bolivar fuerte. See the Non-GAAP Measures section of this Item, above.

The Company had a \$0.2 million increase in net income attributable to noncontrolling interest in the third quarter of 2017 compared to the third quarter of 2016, primarily due to an increase in performance from certain consolidated affiliates in the Company's Asia/Pacific region.

In addition to both the foreign currency transaction gains realized in other income and the currency conversion charge associated with the Company's Venezuelan affiliate recorded in equity income, noted above, the impacts from foreign currency translation positively impacted the Company's third quarter of 2017 results by approximately 1%, or \$0.02 per diluted share.

#### **Consolidated Operations Review – Comparison of the First Nine Months of 2017 with the First Nine Months of 2016**

Net sales for the first nine months of 2017 of \$609.0 million increased 10% compared to net sales of \$555.4 million for the first nine months of 2016. The \$53.6 million increase in net sales was the result of a 6% increase in organic volumes, a 2%, or \$8.5 million increase from sales attributable to the Company's 2016 acquisition of Lubricor and a 2% increase due to changes in price and product mix, partially offset by the negative impact of foreign currency translation of \$1.2 million, or less than 1%.

COGS in the first nine months of 2017 of \$391.5 million increased 13% from \$345.1 million in the first nine months of 2016. The increase in COGS was primarily due to the increase in product volumes, noted above, as well as additional COGS attributed to the Company's 2016 acquisition of Lubricor, the impact of certain raw material cost increases and changes in product mix, partially offset by the positive impact of foreign currency translation year-over-year. In addition, the first nine months of 2017 and 2016 COGS include reclassifications related to the Company's first quarter of 2017 adoption of the pension accounting standard update, noted above.

Gross profit for the first nine months of 2017 increased \$7.2 million, or 3%, from the first nine months of 2016, primarily driven by the increase in sales volumes, noted above, partially offset by a lower gross margin of 35.7% in the first nine months of 2017 compared to 37.9% in the first nine months of 2016. Similar to the discussion of quarter-over-quarter changes in gross margin above, the decrease in the Company's gross margin for the first nine months of 2017 was primarily due to higher raw material costs compared to the prior year and a change in the mix of certain products sold.

SG&A for the first nine months of 2017 increased \$4.0 million compared to the first nine months of 2016 primarily due to the same factors noted in the quarter-over-quarter discussion, above, including additional SG&A associated with the Company's prior year Lubricor acquisition and an increase in labor-related costs primarily due to annual compensation increases and the timing of certain incentive compensation accruals, as well as a first quarter of 2017 cost streamlining initiative, described in the Non-GAAP measures section of this Item, above. These increases to SG&A were partially offset by decreases due to foreign currency translation, and decreases as a result of certain cost savings efforts, including the impact of the 2015 global restructuring program in the current

year. In addition, the first nine months of 2017 and 2016 SG&A include reclassifications related to the Company's first quarter of 2017 adoption of the pension accounting standard update, noted above.

During the first nine months of 2017, the Company incurred \$23.1 million of costs related to its previously announced combination with Houghton, described in the Non-GAAP measures section of this Item, above. The Company incurred \$1.2 million of similar combination-related expenses in the first nine months of 2016.

Operating income in the first nine months of 2017 was \$45.7 million compared to \$64.4 million in the first nine months of 2016. The decrease in operating income was primarily due to the Houghton combination expenses along with slightly higher levels of SG&A not related to the Houghton combination, which more than offset gross profit increases on strong volume growth, noted above.

The Company had other expense of \$1.4 million in the first nine months of 2017 compared to \$0.2 million in the first nine months of 2016. The increase in other expense was primarily driven by a second quarter of 2017 U.S. pension plan settlement charge, described in the Non-GAAP measures section of this Item, above, partially offset by slightly higher foreign currency transaction gains realized in the first nine months of 2017 compared to the first nine months of 2016 and an increase in receipts of local municipality-related grants in one of the Company's regions year-over-year. In addition, the first nine months of 2017 and 2016 other expense includes reclassifications related to the Company's first quarter of 2017 adoption of the pension accounting standard update, noted above.

Interest expense was relatively consistent year-over-year. Interest income increased \$0.4 million in the first nine months of 2017 compared to the first nine months of 2016, primarily due to an increase in the level of the Company's invested cash in certain regions with higher returns.

The Company's effective tax rates for the first nine months of 2017 and 2016 were 32.5% and 31.0%, respectively. The Company's first nine months of 2017 effective tax rate was elevated due to the impact of certain non-deductible Houghton combination-related expenses, which were partially offset by the favorable impact of tax benefits for deductions in excess of compensation cost associated with stock option exercises and restricted stock vesting, noted above. There were no comparable non-deductible combination-related expenses or stock compensation-related tax benefits during the first nine months of 2016. Comparatively, the first nine months of 2016 effective tax rate was elevated, as it reflected earnings taxed at one of the Company's subsidiaries at a statutory tax rate of 25% while awaiting recertification of a concessionary 15% tax rate, which the Company received and recorded the full year benefit of during the fourth quarter of 2016. This concessionary tax rate was available to the Company throughout 2017. The Company has experienced and expects to continue to experience volatility in its effective tax rates due to several factors, including the timing of tax audits and the expiration of applicable statutes of limitations as they relate to uncertain tax positions, the unpredictability of the timing and amount of certain incentives in various tax jurisdictions, the treatment of certain acquisition-related costs and the timing and amount of certain stock compensation-related tax benefits, among other factors.

Equity income increased \$0.7 million in the first nine months of 2017 compared to the first nine months of 2016. The increase in equity income was primarily due to higher earnings from the Company's interest in a captive insurance company in the current year. In addition, the Company recorded a currency conversion charge in both the first nine months of 2017 and 2016, respectively, associated with the Company's Venezuela affiliate. The Company's interest in a captive insurance company and the currency conversion charges recorded are described in the Non-GAAP measures section of this Item, above.

The Company had a \$0.5 million increase in net income attributable to noncontrolling interest in the first nine months of 2017 compared to the first nine months of 2016, primarily due to an increase in performance from certain consolidated affiliates in the Company's Asia/Pacific region.

The impacts from foreign currency translation negatively impacted the Company's first nine months of 2017 results by approximately 1%, or \$0.04 per diluted share, which does not include the foreign currency transaction gains realized in other income or the currency conversion charge associated with the Company's Venezuelan affiliate recorded in equity income, noted above.

#### ***Reportable Operating Segments Review***

The Company sells its industrial process fluids, chemical specialties and technical expertise to a wide range of industries in a global product portfolio throughout its four segments: (i) North America, (ii) EMEA, (iii) Asia/Pacific and (iv) South America.

#### ***Comparison of the Third Quarter of 2017 with the Third Quarter of 2016***

##### ***North America***

North America represented approximately 43% of the Company's consolidated net sales in the third quarter of 2017. The segment's net sales were \$90.5 million, an increase of \$4.3 million or 5% compared to the third quarter of 2016. The increase in net sales was primarily due to an increase in selling price and product mix of 4% and a positive impact of foreign currency translation of 1%. Volumes including acquisitions were consistent quarter-over-quarter. The foreign exchange impact was primarily due to a strengthening of the Mexican peso against the U.S. dollar, as this exchange rate averaged 17.81 in the third quarter of 2017 compared

to 18.74 in the third quarter of 2016. This segment's operating earnings, excluding indirect expenses, were \$18.9 million, a decrease of \$1.5 million or 7% compared to the third quarter of 2016. The decrease in operating earnings quarter-over-quarter was primarily the result of lower gross profit on a decline in gross margin due to increases in certain raw material costs and changes in product mix. Operating earnings were also negatively impacted by higher SG&A, primarily due to increases in labor costs associated with annual merit increases.

#### **EMEA**

EMEA represented approximately 28% of the Company's consolidated net sales in the third quarter of 2017. The segment's net sales were \$58.8 million, an increase of \$9.0 million or 18% compared to the third quarter of 2016. The increase in net sales was primarily due to higher volumes of 8%, increases in selling price and product mix of 4% and the positive impact of foreign currency translation of 6%. The foreign exchange impact was primarily due to a strengthening of the euro against the U.S. dollar, as this exchange rate averaged 1.18 in the third quarter of 2017 compared to 1.12 in the third quarter of 2016. This segment's operating earnings, excluding indirect expenses, were \$8.9 million, an increase of \$0.5 million or 6% compared to the third quarter of 2016. The increase in operating earnings quarter-over-quarter was due to higher gross profit, driven by the increased net sales, noted above, partially offset by a decline in gross margin due to increases in certain raw material costs and changes in product mix. Also, EMEA's SG&A increased in the third quarter of 2017 compared to the prior year quarter due to the region's improved performance and the impact of foreign currency translation, partially offset by the Company's past cost savings efforts.

#### **Asia/Pacific**

Asia/Pacific represented approximately 25% of the Company's consolidated net sales in the third quarter of 2017. The segment's net sales were \$54.2 million, an increase of \$8.3 million or 18% compared to the third quarter of 2016. The increase in net sales was primarily due to higher volumes of 20% partially offset by decreases in selling price and product mix of 2%. This segment's operating earnings, excluding indirect expenses, were \$14.0 million, an increase of \$2.2 million or 19% compared to the third quarter of 2016. The increase in operating earnings was primarily driven by higher gross profit on the increased net sales, noted above, partially offset by a decline in gross margin due to increases in certain raw material costs and changes in product mix and higher levels of SG&A on improved segment performance.

#### **South America**

South America represented approximately 4% of the Company's consolidated net sales in the third quarter of 2017. The segment's net sales were \$9.5 million, an increase \$0.9 million or 11% compared to the third quarter of 2016. The increase in net sales was primarily due to higher volumes of 3%, an increase in selling price and product mix of 7% and the positive impact of foreign currency translation of approximately 1%. The foreign exchange impact was primarily due to the strengthening of the Brazilian real against the U.S. dollar, as this exchange rate averaged 3.16 in the third quarter of 2017 compared to 3.24 in the third quarter of 2016. This segment's operating earnings, excluding indirect expenses, were \$1.0 million, an increase of \$0.3 million or 42% compared to the third quarter of 2016. The increase in operating earnings was driven by higher gross profit on the increased net sales, noted above, as well as higher gross margin on raw material cost changes and impacts from foreign exchange. These increases to operating earnings were partially offset by an increase in the segment's SG&A quarter-over-quarter primarily due to improved segment performance and the impact of foreign currency translation.

#### **Comparison of the First Nine Months of 2017 with the First Nine Months of 2016**

##### **North America**

North America represented approximately 44% of the Company's consolidated net sales in the first nine months of 2017. The segment's net sales were \$268.1 million, an increase of \$16.5 million or 7% compared to the first nine months of 2016. The increase in net sales was primarily due to higher volumes of 3%, including acquisitions, and an increase in selling price and product mix of 4%, partially offset by the negative impact of foreign currency translation of less than 1%. The foreign exchange impact was primarily due to a weakening of the Mexican peso against the U.S. dollar, as this exchange rate averaged 18.82 in the first nine months of 2017 compared to 18.28 in the first nine months of 2016. This reportable segment's operating earnings, excluding indirect expenses, were \$59.1 million, a decrease of \$0.2 million compared to the first nine months of 2016. The decrease during the first nine months of 2017 was the result of a decline in gross margin due to increases in certain raw material costs and changes in product mix, and higher SG&A, primarily due to higher labor costs associated with annual merit increases, which offset higher gross profit on increased sales volumes, noted above.

##### **EMEA**

EMEA represented approximately 28% of the Company's consolidated net sales in the first nine months of 2017. The segment's net sales were \$167.2 million, an increase of \$16.6 million or 11% compared to the first nine months of 2016. The increase in net sales was primarily due to higher volumes of 8% and increases in selling price and product mix of 3%, partially offset by the negative impact of foreign currency translation of less than 1%. The foreign exchange impact was primarily due to a weakening of the euro

against the U.S. dollar, as this exchange rate averaged 1.11 in the first nine months of 2017 compared to 1.12 in the first nine months of 2016. This reportable segment's operating earnings, excluding indirect expenses, were \$26.3 million, an increase of \$0.9 million, or 4% compared to the first nine months of 2016. The increase in operating earnings was primarily driven by higher gross profit on the increased net sales, noted above, partially offset by a decline in gross margin due to increases in certain raw material costs and changes in product mix. EMEA benefitted from a relatively consistent level of SG&A in the first nine months of 2017 compared to the first nine months of 2016, which was the net result of the Company's past cost savings efforts and the impact of foreign currency translation offset by the improved segment performance year-over-year.

#### ***Asia/Pacific***

Asia/Pacific represented approximately 24% of the Company's consolidated net sales in the first nine months of 2017. The segment's net sales were \$147.1 million, an increase of \$16.5 million or 13% compared to the first nine months of 2016. The increase in net sales was primarily due to higher volumes of 17%, partially offset by decreases in selling price and product mix of 3% and the negative impact of foreign currency translation of 1%. The foreign exchange impact was primarily due to the weakening of the Chinese renminbi against the U.S. dollar, as this exchange rate averaged 6.80 in the first nine months of 2017 compared to 6.58 in the first nine months of 2016. This reportable segment's operating earnings, excluding indirect expenses, were \$36.0 million, an increase of \$2.2 million or 6% compared to the first nine months of 2016. The increase during the first nine months of 2017 was primarily due to higher gross profit partially offset by an increase in the segment's SG&A. Gross profit increases were driven by the increases in net sales, noted above, partially offset by a gross margin decline due to increases in certain raw material costs and changes in product mix. The region's higher levels of SG&A were primarily driven by the improved segment performance year-over-year.

#### ***South America***

South America represented approximately 4% of the Company's consolidated net sales in the first nine months of 2017. The segment's net sales were \$26.6 million, an increase of \$3.9 million or 17% compared to the first nine months of 2016. The increase in net sales was primarily due to higher volumes of 3%, an increase in selling price and product mix of 6% and a positive impact of foreign currency translation of 8%. The foreign exchange impact was primarily due to the strengthening of the Brazilian real against the U.S. dollar as this exchange rate averaged 3.17 in the first nine months of 2017 compared to 3.53 in the first nine months of 2016. This reportable segment's operating earnings, excluding indirect expenses, were \$2.8 million, which increased \$2.1 million compared to the first nine months of 2016. The increase during the first nine months of 2017 was mainly driven by higher gross profit on the increase in net sales, noted above, as well as higher gross margin on selling price and product mix, raw material changes and impacts from foreign exchange. In addition, the segment's SG&A declined year-over-year primarily due to the positive effects of various cost savings efforts which offset higher SG&A from improved segment performance and the impact of foreign currency translation.

#### **Factors That May Affect Our Future Results**

(Cautionary Statements Under the Private Securities Litigation Reform Act of 1995)

Certain information included in this Report and other materials filed or to be filed by Quaker with the SEC (as well as information included in oral statements or other written statements made or to be made by us) contain or may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. These statements can be identified by the fact that they do not relate strictly to historical or current facts. We have based these forward-looking statements on our current expectations about future events. These forward-looking statements include statements with respect to our beliefs, plans, objectives, goals, expectations, anticipations, intentions, financial condition, results of operations, future performance and business, including:

- statements relating to our business strategy;
- our current and future results and plans; and
- statements that include the words "may," "could," "should," "would," "believe," "expect," "anticipate," "estimate," "intend," "plan" or other similar expressions.

Such statements include information relating to current and future business activities, operational matters, capital spending, and financing sources. From time to time, forward-looking statements are also included in Quaker's other periodic reports on Forms 10-K, 10-Q and 8-K, press releases, and other materials released to, or statements made to, the public.

Any or all of the forward-looking statements in this Report and in any other public statements we make may turn out to be wrong. This can occur as a result of inaccurate assumptions or as a consequence of known or unknown risks and uncertainties. Many factors discussed in this Report will be important in determining our future performance. Consequently, actual results may differ materially from those that might be anticipated from our forward-looking statements.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. However, any further disclosures made on related subjects in Quaker's subsequent reports on Forms 10-K, 10-Q, 8-K and other related filings should be consulted. Our forward-looking statements are subject to risks, uncertainties and assumptions

**Quaker Chemical Corporation**  
**Management's Discussion and Analysis**

about us and our operations that are subject to change based on various important factors, some of which are beyond our control. A major risk is that demand for the Company's products and services is largely derived from the demand for its customers' products, which subjects the Company to uncertainties related to downturns in a customer's business and unanticipated customer production shutdowns. Other major risks and uncertainties include, but are not limited to, significant increases in raw material costs, customer financial stability, worldwide economic and political conditions, foreign currency fluctuations, significant changes in applicable tax rates and regulations, future terrorist attacks and other acts of violence. Furthermore, the Company is subject to the same business cycles as those experienced by steel, automobile, aircraft, appliance, and durable goods manufacturers. These risks, uncertainties, and possible inaccurate assumptions relevant to our business could cause our actual results to differ materially from expected and historical results. Other factors beyond those discussed, including those related to the Combination, could also adversely affect us including, but not limited to:

- the risk that a required regulatory approval will not be obtained or is subject to conditions that are not anticipated or acceptable to us;
- the potential for regulatory authorities to require divestitures in connection with the Combination, which would result in a smaller than anticipated combined business;
- the risk that a closing condition to the Combination may not be satisfied in a timely manner;
- risks associated with the financing of the Combination;
- the occurrence of any event, change or other circumstance that could give rise to the termination of the share purchase agreement;
- potential adverse effects on Quaker Chemical's business, properties or operations caused by the implementation of the Combination;
- Quaker Chemical's ability to promptly, efficiently and effectively integrate the operations of Houghton International and Quaker Chemical;
- risks related to each company's distraction from ongoing business operations due to the Combination; and,
- the outcome of any legal proceedings that may be instituted against the companies following announcement of the share purchase agreement and transactions contemplated therein.

Therefore, we caution you not to place undue reliance on our forward-looking statements. For more information regarding these risks and uncertainties as well as certain additional risks that we face, you should refer to the Risk Factors detailed in Item 1A of our Form 10-K for the year ended December 31, 2016, the proxy statement filed on July 31, 2017 and in our quarterly and other reports filed from time to time with the Commission. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.

**Item 3. Quantitative and Qualitative Disclosures About Market Risk.**

We have evaluated the information required under this Item that was disclosed in Part II, Item 7A, of our Annual Report on Form 10-K for the year ended December 31, 2016, and we believe there has been no material change to that information.

**Item 4. Controls and Procedures.**

*Evaluation of disclosure controls and procedures.* As required by Rule 13a-15(b) under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), our management, including our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, our principal executive officer and our principal financial officer have concluded that as of the end of the period covered by this report our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) were effective.

*Changes in internal control over financial reporting.* As required by Rule 13a-15(d) under the Exchange Act, our management, including our principal executive officer and principal financial officer, has evaluated our internal control over financial reporting to determine whether any changes to our internal control over financial reporting occurred during the quarter ended September 30, 2017 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, no such changes to our internal control over financial reporting occurred during the quarter ended September 30, 2017.



## PART II.

## OTHER INFORMATION

Items 1A, 3 and 4 of Part II are inapplicable and have been omitted.

**Item 1. Legal Proceedings.**

Incorporated by reference is the information in Note 16 of the Notes to the Condensed Consolidated Financial Statements in Part I, Item 1, of this Report.

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

The following table sets forth information concerning shares of the Company's common stock acquired by the Company during the period covered by this report:

Period	(a) Total Number of Shares Purchased (1)	(b) Average Price Paid Per Share (2)	(c) Total Number of Shares Purchased as part of Publicly Announced Plans or Programs	(d) Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs (3)
July 1 - July 31	1,643	\$ 146.53	—	\$ 86,865,026
August 1 - August 31	12,702	\$ 135.41	—	\$ 86,865,026
September 1 - September 30	—	\$ —	—	\$ 86,865,026
<b>Total</b>	<b>14,345</b>	<b>\$ 136.68</b>	<b>—</b>	<b>\$ 86,865,026</b>

- (1) All of these shares were acquired from employees upon their surrender of Quaker shares in payment of the exercise price of employee stock options exercised or for the payment of taxes upon exercise of employee stock options or the vesting of restricted stock.
- (2) The price paid for shares acquired from employees pursuant to employee benefit and share-based compensation plans, is, in each case, based on the closing price of the Company's common stock on the date of exercise or vesting, as specified by the plan pursuant to which the applicable option or restricted stock was granted.
- (3) On May 6, 2015, the Board of Directors of the Company approved, and the Company announced, a new share repurchase program, pursuant to which the Company is authorized to repurchase up to \$100,000,000 of Quaker Chemical Corporation common stock (the "2015 Share Repurchase Program"). The 2015 Share Repurchase Program, which replaced the Company's other share repurchase plans then in effect, has no expiration date. There were no shares acquired by the Company pursuant to the 2015 Share Repurchase Program during the quarter ended September 30, 2017.

**Item 5. Other Information.**

As part of the Company's integration planning for its combination with Houghton International, Inc., the Company intends to restructure its senior management reporting structure. In connection with that restructuring, it was determined that the position currently held by Mr. Jeffrey Benoliel (Vice President and Global Leader of Metalworking, Can and Mining), would likely be restructured if the transaction is consummated. Following mutually agreeable discussions with Mr. Benoliel, it has been decided that, subject to the closing of the combination, his current position will be restructured and he will not be re-assigned to another senior position with the Company. Instead, Mr. Benoliel will receive severance and other benefits that will be substantially similar to those he would have received in connection with a termination of employment following a change in control of the Company pursuant to his existing Change in Control Agreement with the Company, dated November 19, 2008 (the "Agreement"). Separately, the amounts due to Mr. Benoliel under his existing supplemental retirement income program will be paid in accordance with the terms of that program. As contemplated by the Agreement, payment to Mr. Benoliel of severance and other benefits is subject to his execution and non-revocation of a Release in a form satisfactory to the Company. For additional information, see "Severance and Change in Control Benefits" and "Potential Payments Upon Termination or Change in Control", in the Company's definitive proxy statement on Schedule 14A filed with the Securities and Exchange Commission on March 31, 2017 for additional information.

**Item 6. Exhibits**

(a) Exhibits

- 31.1 – [Certification of Chief Executive Officer of the Company pursuant to Rule 13a-14\(a\) of the Securities Exchange Act of 1934](#)
- 31.2 – [Certification of Chief Financial Officer of the Company pursuant to Rule 13a-14\(a\) of the Securities Exchange Act of 1934](#)
- 32.1 – [Certification of Chief Executive Officer of the Company Pursuant to 18 U.S. C. Section 1350](#)
- 32.2 – [Certification of Chief Financial Officer of the Company Pursuant to 18 U.S. C. Section 1350](#)
- 101.INS – XBRL Instance Document
- 101.SCH – XBRL Extension Schema Document
- 101.CAL – XBRL Calculation Linkbase Document
- 101.DEF – XBRL Definition Linkbase Document
- 101.LAB – XBRL Label Linkbase Document
- 101.PRE – XBRL Presentation Linkbase Document

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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.

QUAKER CHEMICAL CORPORATION  
(Registrant)

/s/ Mary Dean Hall

**Mary Dean Hall, Vice President, Chief Financial Officer and Treasurer (officer duly authorized on behalf of, and principal financial officer of, the Registrant)**

Date: October 26, 2017

## CERTIFICATION OF CHIEF EXECUTIVE OFFICER OF THE COMPANY PURSUANT TO RULE 13a-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934

I, Michael F. Barry, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Quaker Chemical 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: October 26, 2017

/s/ Michael F. Barry  
Michael F. Barry  
Chief Executive Officer

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## CERTIFICATION OF CHIEF FINANCIAL OFFICER OF THE COMPANY PURSUANT TO RULE 13a-14(a) OF THE SECURITIES EXCHANGE ACT OF 1934

I, Mary Dean Hall, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Quaker Chemical 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: October 26, 2017

/s/ Mary Dean Hall  
Mary Dean Hall  
Chief Financial Officer

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**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350**

The undersigned hereby certifies that the Form 10-Q Quarterly Report of Quaker Chemical Corporation (the "Company") for the quarterly period ended September 30, 2017 filed with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: October 26, 2017

/s/ Michael F. Barry

Michael F. Barry  
Chief Executive Officer of Quaker Chemical Corporation

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**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350**

The undersigned hereby certifies that the Form 10-Q Quarterly Report of Quaker Chemical Corporation (the "Company") for the quarterly period ended September 30, 2017 filed with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: October 26, 2017

/s/ Mary Dean Hall

Mary Dean Hall  
Chief Financial Officer of Quaker Chemical Corporation

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