
**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 June 30, 2016

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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

Accelerated filer
Smaller reporting company

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 June 30, 2016**

13,249,759

QUAKER CHEMICAL CORPORATION AND CONSOLIDATED SUBSIDIARIES

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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 June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net sales	\$ 186,915	\$ 183,726	\$ 364,992	\$ 365,056
Cost of goods sold	115,680	113,109	225,882	228,111
Gross profit	71,235	70,617	139,110	136,945
Selling, general and administrative expenses	49,142	49,172	97,783	97,636
Operating income	22,093	21,445	41,327	39,309
Other income (expense), net	271	(88)	977	(282)
Interest expense	(727)	(607)	(1,468)	(1,194)
Interest income	545	375	893	695
Income before taxes and equity in net income of associated companies	22,182	21,125	41,729	38,528
Taxes on income before equity in net income of associated companies	7,238	5,724	13,543	11,083
Income before equity in net income of associated companies	14,944	15,401	28,186	27,445
Equity in net income (loss) of associated companies	461	11	563	(1,426)
Net income	15,405	15,412	28,749	26,019
Less: Net income attributable to noncontrolling interest	390	374	788	603
Net income attributable to Quaker Chemical Corporation	<u>\$ 15,015</u>	<u>\$ 15,038</u>	<u>\$ 27,961</u>	<u>\$ 25,416</u>
Per share data:				
Net income attributable to Quaker Chemical Corporation				
Common Shareholders – basic	\$ 1.13	\$ 1.13	\$ 2.11	\$ 1.91
Net income attributable to Quaker Chemical Corporation				
Common Shareholders – diluted	\$ 1.13	\$ 1.13	\$ 2.11	\$ 1.90
Dividends declared	\$ 0.345	\$ 0.320	\$ 0.665	\$ 0.620

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		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Net income	\$ 15,405	\$ 15,412	\$ 28,749	\$ 26,019
Other comprehensive (loss) income, net of tax				
Currency translation adjustments	(5,092)	2,468	(359)	(8,615)
Defined benefit retirement plans	994	(51)	1,181	2,427
Unrealized gain on available-for-sale securities	157	(341)	613	(271)
Other comprehensive (loss) income	(3,941)	2,076	1,435	(6,459)
Comprehensive income	11,464	17,488	30,184	19,560
Less: Comprehensive income attributable to noncontrolling interest	(237)	(250)	(697)	(509)
Comprehensive income attributable to Quaker Chemical Corporation	\$ 11,227	\$ 17,238	\$ 29,487	\$ 19,051

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	
	June 30, 2016	December 31, 2015
ASSETS		
Current assets		
Cash and cash equivalents	\$ 96,245	\$ 81,053
Accounts receivable, net	184,306	188,297
Inventories		
Raw materials and supplies	38,268	36,876
Work-in-process and finished goods	40,001	38,223
Prepaid expenses and other current assets	23,905	21,404
Total current assets	<u>382,725</u>	<u>365,853</u>
Property, plant and equipment, at cost	234,920	231,164
Less accumulated depreciation	(149,826)	(143,545)
Net property, plant and equipment	85,094	87,619
Goodwill	79,324	79,111
Other intangible assets, net	71,530	73,287
Investments in associated companies	22,324	20,354
Non-current deferred tax assets	19,082	23,468
Other assets	32,217	32,218
Total assets	<u>\$ 692,296</u>	<u>\$ 681,910</u>
LIABILITIES AND EQUITY		
Current liabilities		
Short-term borrowings and current portion of long-term debt	\$ 672	\$ 662
Accounts and other payables	75,569	71,543
Accrued compensation	14,456	19,166
Accrued restructuring	4,080	6,303
Other current liabilities	24,536	26,881
Total current liabilities	<u>119,313</u>	<u>124,555</u>
Long-term debt	83,601	81,439
Non-current deferred tax liabilities	11,748	11,400
Other non-current liabilities	77,401	83,273
Total liabilities	<u>292,063</u>	<u>300,667</u>
Commitments and contingencies (Note 15)		
Equity		
Common stock \$1 par value; authorized 30,000,000 shares; issued and outstanding 2016 – 13,249,759 shares; 2015 – 13,288,113 shares	13,250	13,288
Capital in excess of par value	109,751	106,333
Retained earnings	340,127	326,740
Accumulated other comprehensive loss	(71,790)	(73,316)
Total Quaker shareholders' equity	<u>391,338</u>	<u>373,045</u>
Noncontrolling interest	8,895	8,198
Total equity	<u>400,233</u>	<u>381,243</u>
Total liabilities and equity	<u>\$ 692,296</u>	<u>\$ 681,910</u>

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	
	For the Six Months Ended	
	June 30,	
	2016	2015
Cash flows from operating activities		
Net income	\$ 28,749	\$ 26,019
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	6,331	6,117
Amortization	3,589	3,247
Equity in undistributed (earnings) losses of associated companies, net of dividends	(488)	1,487
Deferred compensation and other, net	3,609	1,325
Stock-based compensation	3,423	3,169
Loss (gain) on disposal of property, plant, equipment and other assets	45	(69)
Insurance settlement realized	(614)	(301)
Pension and other postretirement benefits	(2,896)	1,019
Increase (decrease) in cash from changes in current assets and current liabilities, net of acquisitions:		
Accounts receivable	3,801	(2,344)
Inventories	(2,387)	(1,993)
Prepaid expenses and other current assets	(3,164)	(4,057)
Accounts payable and accrued liabilities	(1,642)	(6,301)
Change in restructuring liabilities	(2,330)	—
Net cash provided by operating activities	<u>36,026</u>	<u>27,318</u>
Cash flows from investing activities		
Investments in property, plant and equipment	(4,377)	(4,277)
Payments related to acquisitions, net of cash acquired	(3,284)	528
Proceeds from disposition of assets	48	102
Insurance settlement interest earned	16	20
Change in restricted cash, net	598	281
Net cash used in investing activities	<u>(6,999)</u>	<u>(3,346)</u>
Cash flows from financing activities		
Proceeds from long-term debt	1,736	—
Repayment of long-term debt	(286)	(12,699)
Dividends paid	(8,480)	(7,991)
Stock options exercised, other	(95)	534
Payments for repurchase of common stock	(5,859)	(1,630)
Excess tax benefit related to stock option exercises	136	378
Net cash used in financing activities	<u>(12,848)</u>	<u>(21,408)</u>
Effect of foreign exchange rate changes on cash	(987)	(1,511)
Net increase in cash and cash equivalents	15,192	1,053
Cash and cash equivalents at beginning of period	81,053	64,731
Cash and cash equivalents at end of period	<u>\$ 96,245</u>	<u>\$ 65,784</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 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 six months ended June 30, 2016 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, 2015. During the first quarter of 2016, the Company revised its Condensed Consolidated Balance Sheet for December 31, 2015, reducing non-current deferred tax assets and non-current deferred tax liabilities by \$3.6 million each, to correct for offsetting deferred tax balances within related taxing jurisdictions. The Company considers such revision to be immaterial and the revision had no impact on reported equity, net income or net cash provided by operating activities.

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 Statement of Income. As of December 31, 2014, there were three legally available exchange rates in Venezuela, the CADIVI (or the official rate, 6.3 BsF per U.S. dollar), the SICAD I and the SICAD II. Kelko Venezuela had access to the CADIVI for imported goods, had not been invited to participate in any SICAD I auctions and had limited access to the SICAD II mechanism. Accordingly, the Company measured its equity investment and other related assets with Kelko Venezuela at the CADIVI exchange rate at December 31, 2014. During the first quarter of 2015, the Venezuela government announced changes to its foreign exchange controls. There continued to be three exchange mechanisms, however, they consisted of the CADIVI, a combined SICAD I and SICAD II auction mechanism (the “SICAD”) and a newly created, marginal currency system (the “SIMADI”). In light of the first quarter of 2015 changes to Venezuela’s foreign exchange controls and the on-going economic challenges in Venezuela, 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, which resulted in revaluing its equity investment in Kelko Venezuela and other related assets to the SIMADI exchange rate of approximately 193 BsF per U.S. dollar as of March 31, 2015. This resulted in a charge of \$2.8 million, or \$0.21 per diluted share, recorded in the first quarter of 2015. As of December 31, 2015, the Company’s equity investment in Kelko Venezuela was \$0.2 million, valued at the SIMADI exchange rate, which was approximately 198 BsF per U.S. dollar.

During the first quarter of 2016, the Venezuela government announced further changes to its foreign exchange controls, including eliminating the CADIVI, SICAD and SIMADI exchange rate mechanisms and replacing them with a new dual foreign exchange rate system, which consists of a protected “DIPRO” exchange rate, with a rate fixed at 10 BsF per U.S. dollar and, also, a floating supplementary market 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 again 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. As of March 31, 2016, the published rate for the DICOM was approximately 273 BsF per U.S. dollar, which resulted in a currency conversion charge of \$0.1 million, or \$0.01 per diluted share in the first quarter of 2016. There was no similar currency conversion charge during the second quarter of 2016. As of June 30, 2016, the Company’s equity investment in Kelko Venezuela was \$0.1 million, valued at the DICOM exchange rate of approximately 628 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 \$11.0 million and \$22.1 million for the three and six months ended June 30, 2016, respectively. Comparatively, third-party products transferred under arrangements resulting in net reporting totaled \$12.2 million and \$24.1 million for the three and six months ended June 30, 2015, respectively.

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

Note 2 – Recently Issued Accounting Standards

The Financial Accounting Standards Board ("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 is effective for annual and interim periods beginning after December 15, 2016. Early adoption is permitted, however, if early adoption is elected, all amendments in the update must be adopted in the same period. When adopted, application of the guidance will vary based on each aspect of the update, including on a retrospective, modified retrospective or prospective basis. The Company has not early adopted and is currently evaluating the potential impact of this guidance and an appropriate implementation strategy.

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 FASB issued an accounting standard update in November 2015 regarding the classification of deferred taxes on the balance sheet. The update requires that all deferred tax assets and liabilities, along with any related valuation allowance, be classified as noncurrent on the balance sheet. The update does not change the existing requirement that only permits offsetting within a jurisdiction. The guidance within this accounting standard update is effective for annual and interim periods beginning after December 15, 2016, and may be applied either prospectively, for all deferred tax assets and liabilities, or retrospectively. Early adoption is permitted. The Company has not early adopted and is considering an appropriate implementation strategy. Adoption of the guidance will not have an impact on the Company's earnings or cash flow but will result in a balance sheet reclassification between current and long-term assets and liabilities.

The FASB issued an accounting standard update in July 2015 regarding simplifying the measurement of inventory. The guidance is applicable for entities that measure inventory using the FIFO or average cost methods. Specifically, the update requires that inventory be measured at lower of cost or net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less reasonably predictable costs of completion, disposal and transportation. The amendments in this update are effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. This guidance should be applied prospectively with early adoption permitted. During the first quarter of 2016, the Company elected to early adopt this guidance without a material impact.

The FASB issued an accounting standard update in May 2015 regarding the required disclosures for entities that elect to measure the fair value of certain investments using the net asset value per share (or its equivalent) practical expedient in accordance with the fair value measurement authoritative guidance. The update removes the requirement to categorize within the fair value hierarchy, and also limits the requirement to make certain other disclosures, for all such investments. The amendments in this update are effective for fiscal years beginning after December 15, 2015, and interim periods within those fiscal years, and should be applied on a retrospective basis for the periods presented. Early adoption was permitted. During the first quarter of 2016, the Company adopted this guidance without a material impact.

The FASB issued an accounting standard update in April 2015 regarding the presentation of debt issuance costs on the balance sheet. The update requires capitalized debt issuance costs be presented on the balance sheet as a reduction to debt, rather than recorded as a separate asset. The amendments in this update are effective for annual and interim periods beginning after December 15, 2015 and should be applied on a retrospective basis for the periods presented. Early adoption was permitted. Also, in June 2015, the SEC staff announced that the guidance within this accounting standard update was not applicable to revolving debt arrangements or credit facilities. During the first quarter of 2016, the Company adopted this guidance without a material impact.

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 ("IFRS"). 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 will be permitted to adopt the new revenue standard early but not before the original effective date. In March 2016, the FASB issued an accounting standard update to clarify the implementation guidance on principal versus agent considerations. In April 2016, the FASB issued an accounting standard update to clarify the

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

identification of performance obligations and the licensing implementation guidance, while retaining the related principles for those areas. In May 2016, the FASB issued an accounting standard update to clarify guidance in certain areas and add some practical expedients to the guidance. The amendments in these 2016 updates do not change the core principle of the previously issued guidance in May 2014. As of June 30, 2016, the Company has started its preliminary assessment for the implementation of this new revenue recognition guidance. Given this assessment is in its early stages, the Company is still assessing materiality and evaluating the potential impact of this guidance and an appropriate implementation strategy.

Note 3 – Restructuring and Related Activities

In response to continued weak economic conditions and market declines in many regions, Quaker’s management approved a global restructuring plan (the “2015 Program”) in the fourth quarter of 2015 to reduce its operating costs. The 2015 Program includes the re-organization of certain commercial functions, the consolidation of certain distribution, laboratory and administrative offices, and other related severance charges. In addition to these actions, the Company made a decision to make available-for-sale certain technology of one of its existing businesses, which also resulted in employee severance and \$0.3 million of intangible assets being reclassified to other current assets as of December 31, 2015. During the six months ended June 30, 2016, there has been no further update and the intangible assets continue to be available for sale and included in other current assets.

The 2015 Program includes 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 still expects to substantially complete all of the initiatives under the 2015 Program in 2016 and expects settlement of these charges to occur primarily in 2016 as well. The Company has not incurred additional restructuring expenses in connection with the 2015 Program during the first six months of 2016, and at this time the Company does not expect material additional restructuring expenses beyond customary and routine adjustments to initial estimates for employee separation benefits.

Restructuring activity recognized in connection with the 2015 Program is as follows:

	North America	EMEA	Asia/Pacific	South America	Total
Accrued restructuring as of					
December 31, 2015	\$ 1,867	\$ 4,265	\$ 135	\$ 36	\$ 6,303
Cash payments	(816)	(1,338)	(137)	(39)	(2,330)
Currency translation adjustments	—	102	2	3	107
Accrued restructuring as of					
June 30, 2016	<u>\$ 1,051</u>	<u>\$ 3,029</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 4,080</u>

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 costs of goods sold and selling, general and administrative expenses (“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 and other income (expense).

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 table presents information about the performance of the Company's reportable operating segments for the three and six months ended June 30, 2016 and 2015:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net sales				
North America	\$ 83,088	\$ 85,965	\$ 165,460	\$ 168,967
EMEA	53,108	41,171	100,757	84,356
Asia/Pacific	43,151	47,846	84,663	92,846
South America	7,568	8,744	14,112	18,887
Total net sales	\$ 186,915	\$ 183,726	\$ 364,992	\$ 365,056
Operating earnings, excluding indirect operating expenses				
North America	\$ 20,122	\$ 20,220	\$ 38,754	\$ 38,045
EMEA	8,903	6,861	16,956	13,432
Asia/Pacific	11,080	12,190	22,128	22,624
South America	338	757	23	2,009
Total operating earnings, excluding indirect operating expenses	40,443	40,028	77,861	76,110
Indirect operating expenses	(16,538)	(16,963)	(32,945)	(33,554)
Amortization expense	(1,812)	(1,620)	(3,589)	(3,247)
Consolidated operating income	22,093	21,445	41,327	39,309
Other income (expense), net	271	(88)	977	(282)
Interest expense	(727)	(607)	(1,468)	(1,194)
Interest income	545	375	893	695
Consolidated income before taxes and equity in net income of associated companies	\$ 22,182	\$ 21,125	\$ 41,729	\$ 38,528

Inter-segment revenues for the three and six months ended June 30, 2016 were \$1.9 million and \$3.8 million for North America, \$3.9 million and \$7.8 million for EMEA, less than \$0.1 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 six months ended June 30, 2015 were \$2.6 million and \$4.6 million for North America, \$4.6 million and \$9.4 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. However, all inter-segment transactions have been eliminated from each reportable operating segment's net sales and earnings for all periods presented above.

Note 5 – 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 six months ended June 30, 2016 and 2015:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Stock options	\$ 216	\$ 199	\$ 417	\$ 384
Nonvested stock awards and restricted stock units	745	759	1,593	1,511
Employee stock purchase plan	20	19	43	37
Non-elective and elective 401(k) matching contribution in stock	587	476	1,276	1,175
Director stock ownership plan	57	31	94	62
Total stock-based compensation expense	\$ 1,625	\$ 1,484	\$ 3,423	\$ 3,169

The Company's estimated taxes payable as of June 30, 2016 and 2015, respectively, were sufficient to fully recognize \$0.1 million and \$0.4 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 six months ended June 30, 2016 and 2015, respectively.

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

During the first quarter of 2016, the Company granted stock options under its LTIP plan 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 uses the Black-Scholes option pricing model and the assumptions set forth in the table below:

	2016
Number of options granted	67,444
Dividend yield	1.49 %
Expected volatility	28.39 %
Risk-free interest rate	1.08 %
Expected term (years)	4.0

The fair value of these options is amortized on a straight-line basis over the vesting period. As of June 30, 2016, unrecognized compensation expense related to options granted was \$1.5 million, to be recognized over a weighted average remaining period of 2.1 years. There were no stock options granted in the second quarter of 2016.

During the first six months of 2016, the Company granted 28,221 nonvested restricted shares and 1,841 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 June 30, 2016, unrecognized compensation expense related to the nonvested shares was \$4.1 million, to be recognized over a weighted average remaining period of 1.8 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 6 – Pension and Other Postretirement Benefits

The components of net periodic benefit cost for the three and six months ended June 30, 2016 and 2015 are as follows:

	Three Months Ended June 30,				Six Months Ended June 30,			
	Pension Benefits		Other Postretirement Benefits		Pension Benefits		Other Postretirement Benefits	
	2016	2015	2016	2015	2016	2015	2016	2015
Service cost	\$ 683	\$ 761	\$ 4	\$ 6	\$ 1,353	\$ 1,534	\$ 8	\$ 11
Interest cost	1,122	1,254	39	49	2,233	2,516	78	99
Expected return on plan assets	(1,354)	(1,396)	—	—	(2,698)	(2,798)	—	—
Actuarial loss amortization	812	877	15	26	1,620	1,758	30	52
Prior service cost amortization	(26)	(25)	—	—	(51)	(51)	—	—
Net periodic benefit cost	<u>\$ 1,237</u>	<u>\$ 1,471</u>	<u>\$ 58</u>	<u>\$ 81</u>	<u>\$ 2,457</u>	<u>\$ 2,959</u>	<u>\$ 116</u>	<u>\$ 162</u>

As of December 31, 2015, the Company elected to use a split discount rate (spot-rate approach) for the U.S. plans and certain foreign plans, which includes the method used to estimate the service and interest components of net periodic benefit cost for pension and other postretirement benefits beginning in the three and six months ended June 30, 2016. This change resulted in a decrease in the service and interest components for pension cost in the three and six months ended June 30, 2016 compared to the three and six months ended June 30, 2015. Historically, the Company estimated service and interest cost components utilizing a single weighted-average discount rate derived from a specific yield curve used to measure the benefit obligation at the beginning of the period. Under the spot-rate approach, service and interest cost components have been estimated based on the application of the spot rates on a given yield curve at each future year to each plan's projected cash flows to measure the benefit obligation at the beginning of the period. The Company made this change to provide a more precise measurement of service and interest costs by improving the correlation between projected benefit cash flows and the corresponding spot yield curve rates. This change has been accounted for as a change in accounting estimate and, accordingly, accounted for prospectively.

Employer Contributions

The Company previously disclosed in its financial statements for the year ended December 31, 2015, that it expected to make minimum cash contributions of \$7.5 million to its pension plans and \$0.5 million to its other postretirement benefit plan in 2016. As of June 30, 2016, \$5.0 million and \$0.3 million of contributions have been made to the Company's pension plans and its postretirement benefit plans, respectively.

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Note 7 – Other Income (Expense), Net

The components of other income (expense), net for the three and six months ended June 30, 2016 and 2015 are as follows:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Income from third party license fees	\$ 177	\$ 204	\$ 449	\$ 458
Foreign exchange gains (losses), net	2	(305)	314	(899)
(Loss) gain on fixed asset disposals, net	(1)	3	4	55
Non-income tax refunds and other related credits	40	—	61	69
Other non-operating income	87	54	211	126
Other non-operating expense	(34)	(44)	(62)	(91)
Total other income (expense), net	<u>\$ 271</u>	<u>\$ (88)</u>	<u>\$ 977</u>	<u>\$ (282)</u>

Note 8 – Income Taxes and Uncertain Income Tax Positions

The Company's effective tax rate for the six months ended June 30, 2016 was 32.5% compared to 28.8% for the six months ended June 30, 2015. The increase in the effective tax rate was primarily due to the Company recording earnings in one of its subsidiaries at a statutory tax rate of 25% during the six months ended June 30, 2016, while it awaits recertification of a concessionary 15% tax rate, which was available to the Company during the six months ended June 30, 2015.

As of June 30, 2016, the Company's cumulative liability for gross unrecognized tax benefits was \$11.4 million. At December 31, 2015, the Company's cumulative liability for gross unrecognized tax benefits was \$11.0 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 \$0.1 million and \$0.1 million for interest and \$0.2 million and \$0.2 million for penalties in its Condensed Consolidated Statements of Income for the three and six months ended June 30, 2016, respectively. The Company recognized \$0.1 million and (\$0.2) million for interest and \$0.1 million and \$0.2 million for penalties in its Condensed Consolidated Statements of Income during the three and six months ended June 30, 2015, respectively. As of June 30, 2016, the Company had accrued \$1.6 million for cumulative interest and \$2.1 million for cumulative penalties in its Condensed Consolidated Balance Sheets, compared to \$1.5 million for cumulative interest and \$1.9 million for cumulative penalties accrued at December 31, 2015.

During the six months ended June 30, 2016 and 2015, the Company recognized a decrease of \$0.8 million and \$0.7 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.

The Company estimates that during the year ending December 31, 2016 it will reduce its cumulative liability for gross unrecognized tax benefits by approximately \$2.0 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, 2016.

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, France from 2008, the Netherlands and the United Kingdom from 2010, Spain from 2011, China and the United States from 2012, and various domestic state tax jurisdictions from 1993.

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, 2008, 2009 and 2010. In the first quarter of 2016, the Italian tax authorities delivered an audit report to Quaker Italia S.r.l. for the tax years 2011, 2012 and 2013 alleging additional tax due. In the fourth quarter of 2015, the Dutch tax authorities assessed the Company's subsidiary, Quaker Chemical B.V., for additional income taxes related to the 2011 tax year and Quaker Chemical B.V. filed a protest of such assessment. In the first quarter of 2016, the French tax authorities gave notice that they were auditing the Company's subsidiary Quaker Chemical S.A, and subsequently, during the second quarter of 2016, gave notice that they closed the audit with no additional tax assessed. As of June 30, 2016, the Company believes it has adequate reserves, where merited, for uncertain tax positions with respect to all of these audits.

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Note 9 – Earnings Per Share

The following table summarizes earnings per share calculations for the three and six months ended June 30, 2016 and 2015:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Basic earnings per common share				
Net income attributable to Quaker Chemical Corporation	\$ 15,015	\$ 15,038	\$ 27,961	\$ 25,416
Less: income allocated to participating securities	(130)	(131)	(243)	(229)
Net income available to common shareholders	\$ 14,885	\$ 14,907	\$ 27,718	\$ 25,187
Basic weighted average common shares outstanding	13,126,134	13,220,264	13,121,470	13,204,599
Basic earnings per common share	\$ 1.13	\$ 1.13	\$ 2.11	\$ 1.91
Diluted earnings per common share				
Net income attributable to Quaker Chemical Corporation	\$ 15,015	\$ 15,038	\$ 27,961	\$ 25,416
Less: income allocated to participating securities	(130)	(131)	(243)	(229)
Net income available to common shareholders	\$ 14,885	\$ 14,907	\$ 27,718	\$ 25,187
Basic weighted average common shares outstanding	13,126,134	13,220,264	13,121,470	13,204,599
Effect of dilutive securities	18,579	19,411	15,183	19,251
Diluted weighted average common shares outstanding	13,144,713	13,239,675	13,136,653	13,223,850
Diluted earnings per common share	\$ 1.13	\$ 1.13	\$ 2.11	\$ 1.90

The following aggregate numbers of stock options and restricted stock units are not included in the diluted earnings per share calculation since the effect would have been anti-dilutive: 3,506 and 7,667 for the three and six months ended June 30, 2016, respectively, and 7,559 and 5,856 for the three and six months ended June 30, 2015, respectively.

Note 10 – Goodwill and Other Intangible Assets

The Company completes its annual 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 has recorded no impairment charges in its past. Changes in the carrying amount of goodwill for the six months ended June 30, 2016 were as follows:

	North America	EMEA	Asia/Pacific	South America	Total
Balance as of December 31, 2015	\$ 42,443	\$ 19,280	\$ 15,244	\$ 2,144	\$ 79,111
Goodwill additions (reductions)	98	(114)	—	—	(16)
Currency translation adjustments	(93)	90	(208)	440	229
Balance as of June 30, 2016	<u>\$ 42,448</u>	<u>\$ 19,256</u>	<u>\$ 15,036</u>	<u>\$ 2,584</u>	<u>\$ 79,324</u>

Gross carrying amounts and accumulated amortization for definite-lived intangible assets as of June 30, 2016 and December 31, 2015 were as follows:

	Gross Carrying Amount		Accumulated Amortization	
	2016	2015	2016	2015
Customer lists and rights to sell	\$ 68,553	\$ 67,435	\$ 18,036	\$ 15,806
Trademarks and patents	23,801	23,147	6,528	5,538
Formulations and product technology	5,808	5,808	4,175	4,082
Other	5,989	5,788	4,982	4,565
Total definite-lived intangible assets	<u>\$ 104,151</u>	<u>\$ 102,178</u>	<u>\$ 33,721</u>	<u>\$ 29,991</u>

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The Company recorded \$1.8 million and \$3.6 million of amortization expense for the three and six months ended June 30, 2016, respectively. Comparatively, the Company recorded \$1.6 million and \$3.2 million of amortization expense for the three and six months ended June 30, 2015, respectively. Estimated annual aggregate amortization expense for the current year and subsequent five years is as follows:

For the year ended December 31, 2016	\$	6,999
For the year ended December 31, 2017		6,672
For the year ended December 31, 2018		6,451
For the year ended December 31, 2019		6,349
For the year ended December 31, 2020		6,071
For the year ended December 31, 2021		5,691

The Company has two indefinite-lived intangible assets totaling \$1.1 million for trademarks at June 30, 2016 and December 31, 2015.

Note 11 – Debt

The Company's primary credit facility is a \$300.0 million syndicated multicurrency credit agreement with a group of lenders, which matures in June 2018. The maximum amount available under this 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 this credit facility generally bear interest at a base rate or LIBOR rate plus a margin. Access to this credit facility is dependent on meeting certain financial and other covenants, but primarily depends on the Company's consolidated leverage ratio calculation, which cannot exceed 3.50 to 1. At June 30, 2016 and December 31, 2015, the Company's consolidated leverage ratio was below 1.0 to 1, and the Company was also in compliance with all of its other covenants. At June 30, 2016 and December 31, 2015, the Company had \$65.3 million and \$62.9 million outstanding, respectively, under its credit facilities. The Company's other debt obligations were primarily industrial development bonds and municipality-related loans as of June 30, 2016 and December 31, 2015.

Note 12 – 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. The Company intends to repurchase shares to at least offset the dilutive impact of shares issued each year as part of its employee benefit and share based compensation plans, and could repurchase more if the Company considers the share price to be at a level that offers an advantageous return for its shareholders. The 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 remaining unutilized 1995 and 2005 Board of Directors authorized share repurchase programs were terminated.

In connection with the 2015 Share Repurchase Program, the Company acquired 83,879 shares of common stock for \$5.9 million, during the six months ended June 30, 2016, and 18,854 shares of common stock for \$1.6 million during the six months ended June 30, 2015. The Company has elected not to hold treasury shares, and, therefore, 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.

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The following tables present the changes in equity, net of tax, for the three and six months ended June 30, 2016 and 2015:

	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
Balance at March 31, 2016	\$ 13,236	\$ 107,950	\$ 329,684	\$ (68,002)	\$ 8,658	\$ 391,526
Net income	—	—	15,015	—	390	15,405
Amounts reported in other comprehensive						
loss	—	—	—	(3,788)	(153)	(3,941)
Dividends (\$0.345 per share)	—	—	(4,572)	—	—	(4,572)
Share issuance and equity-based						
compensation plans	14	1,769	—	—	—	1,783
Excess tax benefit from stock option exercises	—	32	—	—	—	32
Balance at June 30, 2016	<u>\$ 13,250</u>	<u>\$ 109,751</u>	<u>\$ 340,127</u>	<u>\$ (71,790)</u>	<u>\$ 8,895</u>	<u>\$ 400,233</u>
Balance at March 31, 2015	\$ 13,332	\$ 100,947	\$ 305,902	\$ (62,971)	\$ 7,919	\$ 365,129
Net income	—	—	15,038	—	374	15,412
Amounts reported in other comprehensive						
income (loss)	—	—	—	2,200	(124)	2,076
Repurchases of common stock	(19)	—	(1,611)	—	—	(1,630)
Dividends (\$0.32 per share)	—	—	(4,269)	—	—	(4,269)
Disposition of noncontrolling interest	—	—	—	—	(351)	(351)
Share issuance and equity-based						
compensation plans	24	2,044	—	—	—	2,068
Excess tax benefit from stock option exercises	—	91	—	—	—	91
Balance at June 30, 2015	<u>\$ 13,337</u>	<u>\$ 103,082</u>	<u>\$ 315,060</u>	<u>\$ (60,771)</u>	<u>\$ 7,818</u>	<u>\$ 378,526</u>

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	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
Balance at December 31, 2015	\$ 13,288	\$ 106,333	\$ 326,740	\$ (73,316)	\$ 8,198	\$ 381,243
Net income	—	—	27,961	—	788	28,749
Amounts reported in other comprehensive						
income (loss)	—	—	—	1,526	(91)	1,435
Repurchases of common stock	(84)	—	(5,775)	—	—	(5,859)
Dividends (\$0.665 per share)	—	—	(8,799)	—	—	(8,799)
Share issuance and equity-based						
compensation plans	46	3,282	—	—	—	3,328
Excess tax benefit from stock option exercises	—	136	—	—	—	136
Balance at June 30, 2016	<u>\$ 13,250</u>	<u>\$ 109,751</u>	<u>\$ 340,127</u>	<u>\$ (71,790)</u>	<u>\$ 8,895</u>	<u>\$ 400,233</u>
Balance at December 31, 2014	\$ 13,301	\$ 99,056	\$ 299,524	\$ (54,406)	\$ 7,660	\$ 365,135
Net income	—	—	25,416	—	603	26,019
Amounts reported in other comprehensive						
loss	—	—	—	(6,365)	(94)	(6,459)
Repurchases of common stock	(19)	—	(1,611)	—	—	(1,630)
Dividends (\$0.62 per share)	—	—	(8,269)	—	—	(8,269)
Disposition of noncontrolling interest	—	—	—	—	(351)	(351)
Share issuance and equity-based						
compensation plans	55	3,648	—	—	—	3,703
Excess tax benefit from stock option exercises	—	378	—	—	—	378
Balance at June 30, 2015	<u>\$ 13,337</u>	<u>\$ 103,082</u>	<u>\$ 315,060</u>	<u>\$ (60,771)</u>	<u>\$ 7,818</u>	<u>\$ 378,526</u>

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The following tables show the reclassifications from and resulting balances of accumulated other comprehensive loss ("AOCI") for the three and six months ended June 30, 2016 and 2015:

	Currency Translation Adjustments	Defined Benefit Pension Plans	Unrealized Gain (Loss) in Available-for- Sale Securities	Total
Balance at March 31, 2016	\$ (33,873)	\$ (35,064)	\$ 935	\$ (68,002)
Other comprehensive (loss) income before reclassifications				
reclassifications	(4,939)	590	320	(4,029)
Amounts reclassified from AOCI	—	802	(82)	720
Current period other comprehensive (loss) income	(4,939)	1,392	238	(3,309)
Related tax amounts	—	(398)	(81)	(479)
Net current period other comprehensive (loss) income	(4,939)	994	157	(3,788)
Balance at June 30, 2016	<u>\$ (38,812)</u>	<u>\$ (34,070)</u>	<u>\$ 1,092</u>	<u>\$ (71,790)</u>
Balance at March 31, 2015	\$ (25,425)	\$ (39,073)	\$ 1,527	\$ (62,971)
Other comprehensive income (loss) before reclassifications				
reclassifications	2,592	(847)	(365)	1,380
Amounts reclassified from AOCI	—	878	(152)	726
Current period other comprehensive income (loss)	2,592	31	(517)	2,106
Related tax amounts	—	(82)	176	94
Net current period other comprehensive income (loss)	2,592	(51)	(341)	2,200
Balance at June 30, 2015	<u>\$ (22,833)</u>	<u>\$ (39,124)</u>	<u>\$ 1,186</u>	<u>\$ (60,771)</u>

	Currency Translation Adjustments	Defined Benefit Pension Plans	Unrealized Gain (Loss) in Available-for- Sale Securities	Total
Balance at December 31, 2015	\$ (38,544)	\$ (35,251)	\$ 479	\$ (73,316)
Other comprehensive (loss) income before reclassifications				
reclassifications	(268)	113	512	357
Amounts reclassified from AOCI	—	1,600	416	2,016
Current period other comprehensive (loss) income	(268)	1,713	928	2,373
Related tax amounts	—	(532)	(315)	(847)
Net current period other comprehensive (loss) income	(268)	1,181	613	1,526
Balance at June 30, 2016	<u>\$ (38,812)</u>	<u>\$ (34,070)</u>	<u>\$ 1,092</u>	<u>\$ (71,790)</u>
Balance at December 31, 2014	\$ (14,312)	\$ (41,551)	\$ 1,457	\$ (54,406)
Other comprehensive (loss) income before reclassifications				
reclassifications	(8,521)	1,651	(95)	(6,965)
Amounts reclassified from AOCI	—	1,759	(316)	1,443
Current period other comprehensive (loss) income	(8,521)	3,410	(411)	(5,522)
Related tax amounts	—	(983)	140	(843)
Net current period other comprehensive (loss) income	(8,521)	2,427	(271)	(6,365)
Balance at June 30, 2015	<u>\$ (22,833)</u>	<u>\$ (39,124)</u>	<u>\$ 1,186</u>	<u>\$ (60,771)</u>

Approximately 70% and 30% of the amounts reclassified from accumulated other comprehensive loss to the Condensed Consolidated Statement of Income for defined benefit retirement plans during the three and six months ended June 30, 2016 and 2015 were recorded in SG&A and cost of goods sold, respectively. See Note 6 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

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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.

Note 13 – Business Acquisitions

In May 2016, the Company acquired a business that is associated with dust control products for the mining industry for its North America reportable operating segment for \$1.9 million. The acquisition provides a strategic opportunity to expand Quaker’s technology and product portfolio offering in the mining industry. The Company allocated \$1.7 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 15 years. In addition, the Company recorded \$0.1 million of goodwill, related to expected value not allocated to other acquired assets, all of which will be tax deductible. The remaining purchase price of approximately \$0.1 million was allocated to the acquisition date fair value of inventory acquired.

As of June 30, 2016, the allocation of the purchase price for the 2016 acquisition has not been finalized and the one-year measurement period has not ended. Adjustments may be necessary as a result of the Company’s assessment of additional information related to the fair value of assets acquired and liabilities assumed.

In July 2015, the Company acquired Verkol, S.A. (“Verkol”), 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 includes 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.

During the first six months of 2016, the Company identified and recorded certain adjustments to the allocation of the purchase price for the Verkol acquisition. These adjustments were the result of the Company assessing additional information related to assets acquired during the one-year measurement period following the acquisition. As of June 30, 2016, the allocation of the purchase price for the Verkol acquisition has been finalized. The following table presents the final allocation of the purchase price of the assets acquired and liabilities assumed for the Verkol acquisition:

Verkol Acquisition	
Current assets (includes cash acquired)	\$ 31,151
Property, plant and equipment	7,941
Intangibles	
Customer lists and rights to sell	6,146
Trademarks and patents	5,378
Other intangibles	219
Goodwill	5,051
Other long-term assets	158
Total assets purchased	<u>56,044</u>
Current liabilities	(6,720)
Long-term debt	(2,400)
Other long-term liabilities	(5,531)
Total liabilities assumed	<u>(14,651)</u>
Gross cash paid for acquisition	\$ 41,393
Less: cash acquired	<u>15,423</u>
Net cash paid for acquisition	<u>\$ 25,970</u>

In November 2014, the Company acquired Binol AB (“Binol”), a leading bio-lubricants producer primarily serving the Nordic region, included in its EMEA reportable operating segment, for 136.5 million SEK, or approximately \$18.5 million, which is net of 4.4 million SEK, or approximately \$0.5 million, received by the Company as part of a post-closing adjustment in the first quarter of 2015.

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 is not presented, as the operations of the acquired businesses are not material to the overall operations of the Company for the periods presented.

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Note 14 – 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:

<u>Assets</u>	Fair Value Measurements at June 30, 2016			
	Using Fair Value Hierarchy			
	Total Fair Value	Level 1	Level 2	Level 3
Company-owned life insurance	\$ 1,364	\$ —	\$ 1,364	\$ —
Total	\$ 1,364	\$ —	\$ 1,364	\$ —

<u>Assets</u>	Fair Value Measurements at December 31, 2015			
	Using Fair Value Hierarchy			
	Total Fair Value	Level 1	Level 2	Level 3
Company-owned life insurance	\$ 1,336	\$ —	\$ 1,336	\$ —
Total	\$ 1,336	\$ —	\$ 1,336	\$ —

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 June 30, 2016 or December 31, 2015, respectively, so related disclosures have not been included.

Note 15 – Commitments and Contingencies

In 1992, the Company identified certain soil and groundwater contamination at AC Products, Inc. (“ACP”), a wholly owned subsidiary. In voluntary coordination with the Santa Ana California Regional Water Quality Board (“SACRWQB”), ACP has been remediating the contamination, the principal contaminant of which is perchloroethylene (“PERC”). In 2004, the Orange County Water District (“OCWD”) filed a civil complaint against ACP and other parties seeking to recover compensatory and other damages related to the investigation and remediation of the contamination in the groundwater. Pursuant to a settlement agreement with OCWD, ACP agreed, among other things, to operate two groundwater treatment systems to hydraulically contain groundwater contamination emanating from ACP’s site until the concentrations of PERC released by ACP fell below the current Federal maximum contaminant level for four consecutive quarterly sampling events. In February 2014, ACP ceased operation at one of its two groundwater treatment systems, as it had met the above condition for closure. Based on the most recent modeling, it is estimated that the remaining system will operate for another six months to thirty months.

As of June 30, 2016, the Company believes that the range of potential-known liabilities associated with the balance of the ACP water remediation program is approximately \$0.2 million to \$0.9 million, for which the Company has sufficient reserves. 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 believes that it has made adequate accruals for costs associated with other environmental problems of which it is aware, although there can be no assurance regarding the outcome of other unrelated environmental matters. The Company accrued approximately \$0.2 million and \$0.3 million at June 30, 2016 and December 31, 2015, respectively, to provide for such anticipated future environmental assessments and remediation costs.

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. The subsidiary discontinued operations in 1991 and has no remaining assets other than the proceeds received from insurance settlements. To date, the overwhelming majority of these claims have been disposed of without payment and there have been no adverse judgments against the subsidiary. 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 less than \$3.0 million (excluding costs of defense). Although the Company has also been named as a defendant in certain of these cases, no claims have been actively pursued against the Company, and the Company has not contributed to the defense or settlement of any of these cases pursued against the subsidiary. These cases were handled by the subsidiary’s primary and excess insurers who had agreed in 1997 to pay all defense costs and be responsible for all damages assessed against the subsidiary arising out of existing and future asbestos claims up to the aggregate limits of their policies. A significant portion of this primary insurance coverage was provided by an insurer that is insolvent, and the other primary insurers asserted that the aggregate limits of their policies have been exhausted. The subsidiary challenged the applicability of these limits to the claims being brought against the subsidiary. In response, two of the three carriers entered into separate settlement and release agreements with the subsidiary in 2005 and 2007 for \$15.0 million and \$20.0 million, respectively. The proceeds of both settlements are restricted and can only be used to pay claims and costs of defense associated with the subsidiary’s

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

asbestos litigation. In 2007, the subsidiary and the remaining primary insurance carrier entered into a Claim Handling and Funding Agreement, under which the carrier is paying 27% of defense and indemnity costs incurred by or on behalf of the subsidiary in connection with asbestos bodily injury claims. The agreement continues until terminated and can only be terminated by either party by providing a minimum of two years prior written notice. As of June 30, 2016, no notice of termination has been given under this agreement. At the end of the term of the agreement, the subsidiary may choose to again pursue its claim against this insurer regarding the application of the policy limits. The Company believes that, if the coverage issues under the primary policies with the remaining carrier are resolved adversely to the subsidiary and all settlement proceeds were used, the subsidiary may have limited additional coverage from a state guarantee fund established following the insolvency of one of the subsidiary's primary insurers. Nevertheless, liabilities in respect of claims may exceed the assets and coverage available to the subsidiary.

If the subsidiary's assets and insurance coverage were to be exhausted, claimants of the subsidiary could actively pursue claims against the Company because of the parent-subsubsidiary relationship. The Company does not believe that such claims would have merit or that the Company would be held to have liability for any unsatisfied obligations of the subsidiary as a result of such claims. After evaluating the nature of the claims filed against the subsidiary and the small number of such claims that have resulted in any payment, the potential availability of additional insurance coverage at the subsidiary level, the additional availability of the Company's own insurance and the Company's strong defenses to claims that it should be held responsible for the subsidiary's obligations because of the parent-subsubsidiary relationship, the Company believes it is not probable that the Company will incur losses. The Company has been successful to date having claims naming it dismissed during initial proceedings. Since the Company may be in this early stage of litigation for some time, it is not possible to estimate additional losses or range of loss, if any.

As initially disclosed in 2010, one of the Company's subsidiaries may have paid certain value-added-taxes ("VAT") incorrectly and, in certain cases, may not have collected sufficient VAT from certain customers. The VAT rules and regulations at issue are complex, vary among the jurisdictions and can be contradictory, in particular as to how they relate to the subsidiary's products and to sales between jurisdictions. Since its inception, the subsidiary had been consistent in its VAT collection and remittance practices and had never been contacted by any tax authority relative to VAT. The subsidiary later determined that for certain products, a portion of the VAT was incorrectly paid and that the total VAT due exceeded the amount originally collected and remitted by the subsidiary. In response, the subsidiary modified its VAT invoicing and payment procedures to eliminate or mitigate future exposure.

In 2010, three jurisdictions contacted the subsidiary and, since then, the subsidiary has either participated in an amnesty program or entered into a settlement whereby it paid a reduced portion of the amounts owed in resolution of those jurisdictions' claims. In 2013, an additional jurisdiction issued an assessment against the subsidiary for certain tax years. During the fourth quarter of 2015, the subsidiary participated in an amnesty program whereby it paid a reduced portion of the amounts owed in resolution of the jurisdictions' claims. As a result, the Company had no remaining accruals for these or any other related tax assessments at June 30, 2016 or December 31, 2015.

In analyzing the subsidiary's exposure, it is difficult to estimate both the probability and the amount of any potential liabilities due to a number of factors, including: the decrease in exposure over time due to applicable statutes of limitations and actions taken by the subsidiary, the joint liability of customers and suppliers for a portion of the VAT, the availability of a VAT refund for VAT incorrectly paid through an administrative process, any amounts which may have been or will be paid by customers, as well as the timing and structure of any tax amnesties or settlements. In addition, interest and penalties on any VAT due can be a multiple of the base tax. The subsidiary may contest any tax assessment administratively and/or judicially for an extended period of time, but may ultimately resolve its disputes through participation in tax amnesty programs, which are a common practice for settling tax disputes in the jurisdictions in question and which have historically occurred on a regular basis, resulting in significant reductions of interest and penalties. Also, the timing of payments and refunds of VAT may not be contemporaneous, and, if additional VAT is owed, it may not be fully recoverable from customers. As of June 30, 2016, the Company believes there is one potentially impacted jurisdiction remaining, and if the jurisdiction were to initiate audits and issue assessments, the remaining exposure, net of refunds, could be from \$0 million to \$1.4 million, assuming the continued availability of future amnesty programs or settlements to reduce the interest and penalties. If there are future assessments but no such future amnesty programs or settlements, the potential exposure could be higher.

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.

Quaker Chemical Corporation
Management's Discussion and Analysis

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 delivered strong operating results in the second quarter of 2016 on organic and acquisition-related volume growth, despite continued challenges in its global end-markets. Specifically, net sales increased 2% to \$186.9 million in the second quarter of 2016 compared to \$183.7 million in the second quarter of 2015, driven by a 6% growth in organic and acquisition volumes, partially offset by the negative impact of foreign currency translation of \$5.3 million, or 3%, and declines in selling price and product mix of 1%. The net sales increase, noted above, on relatively consistent gross margins of 38.1% in the second quarter of 2016 and 38.4% in the second quarter of 2015, drove an increase in gross profit of 1%. Selling, general and administrative expenses ("SG&A") decreased less than \$0.1 million in the second quarter of 2016 compared to the second quarter of 2015, primarily due to decreases from foreign currency translation, largely offset by incremental costs associated with the Company's July 2015 Verkol S.A. ("Verkol") acquisition. In addition, overall labor-related costs were relatively flat quarter-over-quarter as annual compensation increases were offset by certain cost savings efforts, including initial modest savings as a result of the 2015 global restructuring program. Related to this restructuring program, the Company did not incur any additional restructuring expenses in the second quarter of 2016 and continues to execute the program as planned. The Company continues to project pre-tax cost savings as a result of this program to approximate \$3 million in 2016 and \$6 million annually in subsequent years. Overall, the Company's operating income increased 3% to \$22.1 million in the second quarter of 2016 compared to \$21.4 million in the second quarter of 2015 and the Company's adjusted EBITDA increased 5% to \$27.7 million in the second quarter of 2016 compared to \$26.2 million in the second quarter of 2015. These results were driven by the increase in net sales noted above on relatively consistent gross margins and SG&A in each quarter.

The Company's strong operating performance, offset by a higher effective tax rate of 32.6% in the second quarter of 2016 compared to 27.1% in the second quarter of 2015, resulted in earnings per diluted share of \$1.13 for both the second quarters of 2016 and 2015, respectively, and a decrease in non-GAAP earnings per diluted share to \$1.11 in the second quarter of 2016 compared to \$1.15 in the second quarter of 2015. The Company has recognized a higher effective tax rate during the first half of 2016 while it awaits recertification of a concessionary tax rate in one of its subsidiaries, which the Company expects to receive in the fourth quarter of 2016, and which was available to the Company throughout 2015. The Company's reported and non-GAAP results in the second quarter of 2016 were also negatively impacted by foreign exchange of approximately 4%, or \$0.05 per diluted share. See the Non-GAAP Measures section of this Item, below, as well as other items discussed in the Company's Consolidated Operations Review, in the Operations section of this Item, below.

From a regional perspective, the Company's second quarter of 2016 operating performance was driven by continued strength in volume and market share gains in Europe, Middle East and Africa ("EMEA") and North America, which were partially offset by the negative impacts from foreign currency translation and declines in selling price and product mix. In EMEA, the region increased its operating earnings on strong organic volume growth, and the Company's 2015 acquisition of Verkol, partially offset by lower gross margins on selling price and product mix. In North America, increases in organic sales volume coupled with gross margin expansion were offset by the negative impact of foreign currency translation and decreases from selling price and product mix. In Asia/Pacific, gross margin expansion and reduced levels of SG&A were offset by the negative impact of foreign currency translation and decreases in volume, selling price and product mix. In the Company's smallest region, South America, results continued to be negatively impacted by weak economic conditions leading to lower volumes due to decreased end-user production, as well as negative impacts from foreign currency translation. These negative impacts on South America's performance were partially offset by the positive effects of selling price and product mix and lower labor-related costs as a result of various initiatives, including cost streamlining efforts taken in this segment in prior years. See the Reportable Operating Segments Review, in the Operations section of this Item, below.

The Company's solid operating performance, coupled with lower cash invested in the Company's working capital, generated net operating cash flows of \$25.2 million in the second quarter of 2016, which increased net operating cash flows by 32% to \$36.0 million in the first six months of 2016 compared to \$27.3 million in the first six months of 2015. The key drivers of the Company's working capital improvement are further discussed in the Company's Liquidity and Capital Resources section of this Item, below.

Overall, the Company is pleased with its solid results in the second quarter of 2016. The Company was able to grow volumes both organically by 2% and from acquisitions by 4%, which coupled with stable gross margins and controlled SG&A levels, drove significant operating income growth, increases in adjusted EBITDA and strong operating cash flow compared to the second quarter of

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2015. Notably, these results were also achieved despite end-market challenges and the negative impact from foreign exchange on net sales and earnings of approximately 3% and 4%, respectively.

Looking forward to the remainder of 2016, the Company still expects some decline in gross margin due to timing differences between raw material price changes and our product pricing adjustments. However, the Company expects benefits from its global restructuring program and its track record of market share gains and leveraging of past acquisitions will continue to help offset market challenges. In addition, the Company's strong cash flow generation and balance sheet continue to be strengths that will support future key strategic initiatives and acquisitions. Overall, the Company remains confident in its future and expects 2016 will continue to be another good year for Quaker, as the Company continues to forecast growth in both its top and bottom lines during 2016, and still expects to increase non-GAAP earnings and adjusted EBITDA for the seventh consecutive year.

Liquidity and Capital Resources

Quaker's cash and cash equivalents increased to \$96.2 million at June 30, 2016 from \$81.1 million at December 31, 2015. The approximate \$15.1 million increase was the net result of \$36.0 million of cash provided by operating activities, partially offset by \$7.0 million of cash used in investing activities, approximately \$12.9 million of cash used in financing activities and a \$1.0 million decrease due to the effect of changes in foreign exchange rates on cash.

Net cash flows provided by operating activities were \$36.0 million in the first six months of 2016 compared to \$27.3 million in the first six months of 2015. The \$8.7 million increase in cash flows provided by operating activities was driven primarily by improved operating performance and lower cash invested in the Company's current assets and liabilities during the first six months of 2016 compared to the first six months of 2015, partially offset by a year-over-year increase in cash outflows related to pension and postretirement benefits due to timing and increased pension contributions. Overall, the decrease in cash outflows from changes in current assets and liabilities was primarily due to timing of accounts receivable collections and lower cash outflows from accounts payable and accrued liabilities on improved working capital management. Partially offsetting these increases to operating cash flow were restructuring payments made in the first six months of 2016, as part of the Company's global restructuring program initiated in the fourth quarter of 2015.

Net cash flows used in investing activities increased from \$3.3 million in the first six months of 2015 to \$7.0 million in the first six months of 2016, primarily due to higher payments for acquisitions. During the first six months of 2016, the Company had cash outflows of \$1.4 million due to a post-closing adjustment to finalize its 2015 acquisition of Verkol and \$1.9 million for the acquisition of a business associated with dust control products for the mining industry, compared to a cash inflow of \$0.5 million during the first six months of 2015 due to a post-closing adjustment to finalize its 2014 acquisition of Binol AB. This higher cash outflow was partially offset by changes in the Company's restricted cash, which is dependent upon the timing of claims and payments associated with a subsidiary's asbestos litigation. Spending related to property, plant and equipment in the first six months of 2016 was relatively flat compared to the first six months of 2015 in total, and levels of spending within the Company's regional segments were relatively consistent as well.

Net cash flows used in financing activities were approximately \$12.9 million in the first six months of 2016 compared to \$21.4 million in the first six months of 2015. The \$8.5 million decrease in cash outflows was primarily due to proceeds from long-term debt, net of repayments, of \$1.5 million in the first six months of 2016 compared to long-term debt repayments of \$12.7 million in the first six months of 2015. In addition, the Company had increased dividend payments and additional share repurchases of \$0.5 million and \$4.2 million, respectively, in the first six months of 2016 compared to the first six months of 2015.

The Company's primary credit facility is a \$300.0 million syndicated multicurrency credit agreement with a group of lenders, which matures in June 2018. The maximum amount available under this 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 this credit facility generally bear interest at a base rate or LIBOR rate plus a margin. Access to this credit facility is dependent on meeting certain financial and other covenants, but primarily depends on the Company's consolidated leverage ratio calculation, which cannot exceed 3.50 to 1. As of June 30, 2016 and December 31, 2015, the Company's consolidated leverage ratio was below 1.0 to 1, and the Company was also in compliance with all of its other covenants. At June 30, 2016 and December 31, 2015, the Company had \$65.3 million and \$62.9 million outstanding, respectively, under its credit facilities. The Company's other debt obligations were primarily industrial development bonds and municipality-related loans as of June 30, 2016 and December 31, 2015.

The Company continues to execute its global restructuring program initiated in the fourth quarter of 2015 as planned, and did not incur any additional restructuring expenses during the first six months of 2016. During the first six months of 2016, the Company realized modest cost savings related to this program, and continues to project pre-tax cost savings as a result of this program to approximate \$3 million in 2016 and \$6 million annually in subsequent years. In addition, the Company still expects to substantially complete this program during 2016, utilizing operating cash flows for the settlement of its remaining restructuring liabilities.

At June 30, 2016, the Company's gross liability for uncertain tax positions, including interest and penalties, was \$15.0 million. The Company cannot determine a reliable estimate of the timing of cash flows by period related to its uncertain tax position liability.

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However, should the entire liability be paid, the amount of the payment may be reduced by up to \$9.6 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, pension plan contributions, other potential contingencies, payments of dividends to shareholders, capital expenditures, share repurchases, acquisitions and other business opportunities, through internally generated funds supplemented with debt or equity as needed.

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:

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
GAAP earnings per diluted share attributable to Quaker Chemical Corporation				
common shareholders	\$ 1.13	\$ 1.13	\$ 2.11	\$ 1.90
Equity (income) loss in a captive insurance company per diluted share	(0.02)	0.01	(0.03)	(0.05)
U.S. customer bankruptcy per diluted share	—	0.01	—	0.01
Cost streamlining initiatives per diluted share	—	—	—	0.01
Currency conversion impact of the Venezuelan Bolivar Fuerte per diluted share	—	—	0.01	0.21
Non-GAAP earnings per diluted share	<u>\$ 1.11</u>	<u>\$ 1.15</u>	<u>\$ 2.09</u>	<u>\$ 2.08</u>

	Three Months Ended		Six Months Ended	
	June 30,		June 30,	
	2016	2015	2016	2015
Net income attributable to Quaker Chemical Corporation	\$ 15,015	\$ 15,038	\$ 27,961	\$ 25,416
Depreciation and amortization	4,986	4,666	9,920	9,364
Interest expense	727	607	1,468	1,194
Taxes on income before equity in net income of associated companies	7,238	5,724	13,543	11,083
Equity (income) loss in a captive insurance company	(303)	100	(355)	(695)
U.S. customer bankruptcy	—	111	—	111
Cost streamlining initiatives	—	—	—	173
Currency conversion impact of the Venezuelan Bolivar Fuerte	—	—	88	2,806
Adjusted EBITDA	<u>\$ 27,663</u>	<u>\$ 26,246</u>	<u>\$ 52,625</u>	<u>\$ 49,452</u>

Operations

Consolidated Operations Review – Comparison of the Second Quarter of 2016 with the Second Quarter of 2015

Net sales in the second quarter of 2016 of \$186.9 million increased 2% from \$183.7 million in the second quarter of 2015. The increase in net sales was primarily due to a 6% increase in volumes, including approximately \$8.1 million of sales attributable to the Company's 2015 acquisition of Verkol, partially offset by the negative impact of foreign currency translation of \$5.3 million, or 3%, and declines in selling price and product mix of 1%.

Costs of goods sold ("COGS") in the second quarter of 2016 of \$115.7 million increased 2% from \$113.1 million in the second quarter of 2015. The increase in COGS was primarily due to increases in product volume, including the additional COGS attributed to the Company's 2015 acquisition of Verkol, partially offset by decreases from foreign currency translation, a decline in raw material costs and the mix of products sold.

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Gross profit in the second quarter of 2016 increased \$0.6 million, or 1%, from the second quarter of 2015. The increase in gross profit was primarily driven by the increase in sales volumes, noted above, on relatively consistent gross margins of 38.1% in the second quarter of 2016 compared to 38.4% in the second quarter of 2015, which was partially offset by the negative impact of foreign currency translation.

SG&A in the second quarter of 2016 decreased less than \$0.1 million compared to the second quarter of 2015, primarily due to decreases in foreign currency translation and certain one-time charges incurred during the second quarter of 2015, including \$0.1 million, or \$0.01 per diluted share, related to a U.S. customer bankruptcy, partially offset by incremental costs associated with the Company's 2015 acquisition of Verkol. In addition, overall labor-related costs were relatively flat quarter-over-quarter as annual compensation increases were offset by certain cost savings efforts, including initial modest savings as a result of the 2015 global restructuring program. The Company did not incur any additional restructuring expenses related to this program in the second quarter of 2016 and continues to execute the program as planned.

Operating income in the second quarter of 2016 was \$22.1 million, a 3% increase compared to \$21.4 million in the second quarter of 2015. The increase in operating income was primarily due to the increase in sales volumes in the second quarter of 2016, noted above, on relatively consistent gross margins and SG&A in both quarters.

The Company had other income of \$0.3 million in the second quarter of 2016 compared to other expense of \$0.1 million in the second quarter of 2015. The increase of \$0.4 million in other income was primarily driven by foreign currency transaction gains realized in the second quarter of 2016 compared to foreign currency transaction losses in the second quarter of 2015.

Interest expense was \$0.1 million higher in the second quarter of 2016 compared to the second quarter of 2015, primarily due to higher average borrowings outstanding in the second quarter of 2016 to fund the Company's recent acquisition activity. Interest income was \$0.2 million higher in the second quarter of 2016 compared to the second quarter of 2015, primarily due to an increase in the level of the Company's invested cash in certain regions with higher returns and interest received on certain tax-related credits in the second quarter of 2016.

The Company's effective tax rates for the second quarters of 2016 and 2015 were 32.6% and 27.1%, respectively. The increase in the second quarter of 2016 effective tax rate was primarily due to the Company recording earnings in one of its subsidiaries at a statutory tax rate of 25% while it awaits recertification of a concessionary 15% tax rate, which was available to the Company during the second quarter of 2015. For the same reason, the Company currently estimates its third quarter of 2016 effective tax rate will be between 29% and 31%. However, the Company still estimates its full year 2016 effective tax rate will approximate 28% to 30%.

Equity in net income of associated companies ("equity income") increased by \$0.5 million in the second quarter of 2016 compared to the second quarter of 2015. The increase in equity income was primarily due to higher earnings from the Company's interest in a captive insurance company. Earnings attributable to this equity interest were \$0.3 million, or \$0.02 per diluted share, in the second quarter of 2016 compared to a loss of \$0.1 million, or \$0.01 per diluted share, in the second quarter of 2015.

Net income attributable to noncontrolling interest was relatively flat in the second quarter of 2016 compared to the second quarter of 2015.

Changes in foreign exchange rates negatively impacted the Company's second quarter of 2016 net income by approximately 4%, or \$0.05 per diluted share.

Consolidated Operations Review – Comparison of the First Six Months of 2016 with the First Six Months of 2015

Net sales for the first six months of 2016 of \$365.0 million were relatively flat compared to net sales of \$365.1 million for the first six months of 2015. The consistent net sales were the result of a 6% increase in volumes, including approximately \$15.5 million of sales attributable to the Company's 2015 acquisition of Verkol, partially offset by the negative impact of foreign currency translation of \$13.3 million, or 4%, and declines in selling price and product mix of 2%.

COGS in the first six months of 2016 of \$225.9 million decreased 1% from \$228.1 million in the first six months of 2015. The decrease in COGS was primarily due to a decline in raw material costs, the mix of products sold, and the impact of foreign currency translation, which was partially offset by increases in product volume, including additional COGS attributed to the Company's 2015 acquisition of Verkol.

Gross profit for the first six months of 2016 increased \$2.2 million, or 2%, from the first six months of 2015, which was primarily driven by the increase in sales volumes, noted above, on higher gross margin of 38.1% for the first six months of 2016 compared to 37.5% in the first six months of 2015. The Company's expansion in gross margin was primarily due to a continued lag in timing between certain raw material cost decreases and related selling price changes.

SG&A for the first six months of 2016 increased \$0.1 million compared to the first six months of 2015 primarily due to incremental costs associated with the Company's 2015 acquisition of Verkol, partially offset by decreases from foreign currency translation and certain one-time charges incurred during the first six months of 2015. These one-time charges included \$0.2 million,

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or \$0.01 per diluted share, related to a cost streamlining initiative in South America, \$0.2 million, or \$0.01 per diluted share, related to events at the Company's Venezuelan affiliate, noted below, and \$0.1 million, or \$0.01 per diluted share, related to a U.S. customer bankruptcy. In addition, the Company incurred additional SG&A for normal year-over-year labor-related compensation increases, however, these were offset by certain cost savings efforts, noted above.

Operating income in the first six months of 2016 was \$41.3 million, a 5% increase compared to \$39.3 million in the first six months of 2015. The increase in operating income was primarily due to the increase in sales volumes and gross margin in the first six months of 2016, noted above, on a relatively consistent level of SG&A.

The Company had other income of \$1.0 million in the first six months of 2016 compared to other expense of \$0.3 million in the first six months of 2015. The increase in other income was primarily driven by foreign currency transaction gains realized in the first six months of 2016 compared to foreign currency transaction losses in the first six months of 2015.

Interest expense increased \$0.3 million in the first six months of 2016 compared to the first six months of 2015, primarily due to higher average borrowings outstanding in the current period to fund the Company's recent acquisition activity. Interest income increased \$0.2 million in the first six months of 2016 compared to the first six months of 2015, primarily due to an increase in the level of the Company's invested cash in certain regions with higher returns in the first six months of 2016.

The Company's effective tax rates for the first six months of 2016 and 2015 were 32.5% and 28.8%, respectively. The increase in the first six months of 2016 effective tax rate was primarily due to the Company recording earnings in one of its subsidiaries at a statutory tax rate of 25% while it awaits recertification of a concessionary 15% tax rate, which was available to the Company during the first six months of 2015. In addition, the Company has experienced and expects to further experience volatility in its effective tax rates due to the varying timing of tax audits and the expirations of applicable statutes of limitations as they relate to uncertain tax positions, among other factors.

Equity income increased \$2.0 million in the first six months of 2016 compared to the first six months of 2015. The increase in equity income was primarily due to a smaller currency conversion charge of \$0.1 million, or \$0.01 per diluted share, recorded at the Company's Venezuela affiliate during the first six months of 2016, compared to a charge of \$2.6 million, or \$0.20 per diluted share during the first six months of 2015, related to changes in Venezuela's foreign exchange markets and currency controls in both periods. See Note 1 of Notes to Condensed Consolidated Financial Statements. Outside of these charges, the primary component of equity income is the Company's interest in a captive insurance company. Earnings attributable to this equity interest were \$0.4 million, or \$0.03 per diluted share, for the first six months of 2016 compared to \$0.7 million, or \$0.05 per diluted share, for the first six months of 2015.

The Company had a \$0.2 million increase in net income attributable to noncontrolling interest in the first six months of 2016 compared to the first six months of 2015, primarily due to stronger performance at its India affiliate.

Changes in foreign exchange rates, excluding the currency conversion impacts of the Venezuelan bolivar fuerte, noted above, negatively impacted the Company's first six months of 2016 net income by approximately 3%, or \$0.07 per diluted share.

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 Second Quarter of 2016 with the Second Quarter of 2015

North America

North America represented approximately 45% of the Company's consolidated net sales in the second quarter of 2016, and the region's sales decreased \$2.9 million, or 3%, compared to the second quarter of 2015. The decrease in net sales was primarily due to the negative impact of foreign currency translation of 2% and a decrease in selling price and product mix of 3%, partially offset by higher volumes of 2%. The foreign exchange impact was primarily due to a weakening of the Mexican peso against the U.S. dollar, as this exchange rate averaged 18.09 in the second quarter of 2016 compared to 15.32 in the second quarter of 2015. This reportable segment's operating earnings, excluding indirect expenses, decreased \$0.1 million compared to the second quarter of 2015. The second quarter of 2016 decrease was driven by lower gross profit, primarily as a result of the negative impact of foreign currency translation, which offset increased sales volumes, noted above, and gross margin expansion due to continued timing of certain raw material cost decreases. Overall, North America's SG&A was relatively flat quarter-over-quarter.

EMEA

EMEA represented approximately 28% of the Company's consolidated net sales in the second quarter of 2016, and the region's sales increased \$11.9 million, or 29%, compared to the second quarter of 2015. The increase in net sales was primarily due to higher volumes, including acquisitions, of 29% and foreign currency translation of 1%, partially offset by decreases in selling price and product mix of 1%. The foreign exchange impact was primarily due to a strengthening of the euro against the U.S. dollar, as this

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exchange rate averaged 1.13 in the second quarter of 2016 compared to an average of 1.11 in the second quarter of 2015. This reportable segment's operating earnings, excluding indirect expenses, increased \$2.0 million, or 30%, compared to the second quarter of 2015. The second quarter of 2016 increase was mainly driven by higher gross profit on the increased net sales, noted above, partially offset by incremental operating costs from the 2015 Verkol acquisition and higher labor-related costs on improved segment performance.

Asia/Pacific

Asia/Pacific represented approximately 23% of the Company's consolidated net sales in the second quarter of 2016, and the region's sales decreased \$4.7 million, or 10%, compared to the second quarter of 2015. The decrease in net sales was primarily due to the negative impact of foreign currency translation of 5%, a decrease in volumes of 3% and a decrease in selling price and product mix of approximately 2%. The foreign exchange impact was primarily due to the weakening of the Chinese renminbi, Indian rupee and Australian dollar against the U.S. dollar, as these exchange rates averaged 6.53, 66.91 and 0.75 in the second quarter of 2016 compared to 6.11, 63.39 and 0.78 in the second quarter of 2015, respectively. This reportable segment's operating earnings, excluding indirect expenses, decreased \$1.1 million, or 9%, compared to the second quarter of 2015. The second quarter of 2016 decrease was mainly driven by lower gross profit primarily as a result of the negative impact of foreign currency translation and decreased net sales, noted above, partially offset by margin expansion due to continued timing of certain raw material cost decreases and lower labor-related costs on a decline in segment performance.

South America

South America represented approximately 4% of the Company's consolidated net sales in the second quarter of 2016, and the region's sales decreased \$1.2 million, or 13%, compared to the second quarter of 2015. The decrease in net sales was primarily due to the negative impact of foreign currency translation of 19% and lower volumes of 10%, partially offset by an increase in selling price and product mix of approximately 16%. The foreign exchange impact was primarily due to the weakening of the Brazilian real and Argentinian peso against the U.S. dollar, as these exchange rates averaged 3.51 and 14.21 in the second quarter of 2016 compared to 3.07 and 8.95 in the second quarter of 2015, respectively. This reportable segment's operating earnings, excluding indirect expenses, decreased \$0.4 million, or 55%, compared to the second quarter of 2015. The second quarter of 2016 decrease was mainly driven by lower gross profit on the decreased net sales, noted above, and lower gross margin due primarily to raw material cost increases, partially offset by lower labor-related costs. This decrease in labor-related costs was primarily due to the segment's lower performance and the positive effects of various cost savings efforts, including the Company's prior years' streamlining efforts in this segment.

Comparison of the First Six Months of 2016 with the First Six Months of 2015

North America

North America represented approximately 45% of the Company's consolidated net sales in the first six months of 2016, which decreased \$3.5 million, or 2%, compared to the first six months of 2015. The decrease in net sales was primarily due to the negative impact of foreign currency translation of 2% and a decrease in selling price and product mix of 3%, partially offset by higher volumes of 3%. The foreign exchange impact was primarily due to a weakening of the Mexican peso against the U.S. dollar, as this exchange rate averaged 18.05 in the first six months of 2016 compared to 15.13 in the first six months of 2015. This reportable segment's operating earnings, excluding indirect expenses, increased \$0.7 million, or 2%, compared to the first six months of 2015. The increase during the first six months of 2016 was mainly driven by higher gross profit on increased sales volumes, noted above, and gross margin expansion due to continued timing of certain raw material cost decreases, which were partially offset by higher labor-related costs.

EMEA

EMEA represented approximately 28% of the Company's consolidated net sales in the first six months of 2016, which increased \$16.4 million, or 19%, compared to the first six months of 2015. The increase in net sales was primarily due to higher volumes, including acquisitions, of 23%, partially offset by decreases in selling price and product mix of 3% and the negative impact of foreign currency translation of less than 1%. This reportable segment's operating earnings, excluding indirect expenses, increased \$3.5 million, or 26%, compared to the first six months of 2015. The increase during the first six months of 2016 was mainly driven by higher gross profit on the increased net sales, noted above, on relatively consistent gross margin, partially offset by incremental operating costs from the 2015 Verkol acquisition and higher labor-related costs on improved segment performance.

Asia/Pacific

Asia/Pacific represented approximately 23% of the Company's consolidated net sales in the first six months of 2016, which decreased \$8.2 million, or 9%, compared to the first six months of 2015. The decrease in net sales was primarily due to the negative impact of foreign currency translation of 5%, a decrease in selling price and product mix of 2% and a decrease in volumes of 2%. The foreign exchange impact was primarily due to the weakening of the Chinese renminbi, Indian rupee and Australian dollar against the

Quaker Chemical Corporation
Management's Discussion and Analysis

U.S. dollar, as these exchange rates averaged 6.54, 67.19 and 0.73 in the first six months of 2016 compared to 6.13, 62.81 and 0.78 in the first six months of 2015, respectively. This reportable segment's operating earnings, excluding indirect expenses, decreased \$0.5 million, or 2%, compared to the first six months of 2015. The decrease during the first six months of 2016 was mainly driven by lower gross profit on the decrease in net sales, noted above, partially offset by gross margin expansion due to continued timing of certain raw material cost decreases and lower labor-related costs year-over-year.

South America

South America represented approximately 4% of the Company's consolidated net sales in the first six months of 2016, which decreased \$4.8 million, or 25%, compared to the first six months of 2015. The decrease in net sales was primarily due to the negative impact of foreign currency translation of approximately 24% and lower volumes of approximately 13%, partially offset by an increase in selling price and product mix of 12%. The foreign exchange impact was due to the weakening of the Brazilian real and Argentinian peso against the U.S. dollar, as these exchange rates averaged 3.69 and 14.29 in the first six months of 2016 compared to 2.96 and 8.82 in the first six months of 2015, respectively. This reportable segment's operating earnings, excluding indirect expenses, decreased \$2.0 million compared to the first six months of 2015. The decrease during the first six months of 2016 was mainly driven by lower gross profit on the decrease in net sales, noted above, and lower gross margin from higher raw material costs. These decreases were partially offset by lower overall labor-related costs due to the segment's decreased performance and the positive effects of various cost savings efforts, including the Company's prior years' streamlining efforts in this segment.

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 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 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, 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 could also adversely affect us. Therefore, we caution you not to place undue reliance on our forward-looking statements. 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, 2015, 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 June 30, 2016 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 June 30, 2016.

PART II.
OTHER INFORMATION

Items 1A, 3, 4 and 5 of Part II are inapplicable and have been omitted.

Item 1. Legal Proceedings

Incorporated by reference is the information in Note 15 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)
April 1 - April 30	—	\$ —	—	\$ 86,865,026
May 1 - May 31	1,559	\$ 86.26	—	\$ 86,865,026
June 1 - June 30	388	\$ 87.58	—	\$ 86,865,026
Total	1,947	\$ 86.52	—	\$ 86,865,026

- (1) All of these shares were acquired from employees upon their surrender of previously owned 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 period covered by this report.

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

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: July 27, 2016

**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: July 27, 2016

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

**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: July 27, 2016

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

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 June 30, 2016 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: July 27, 2016

/s/ Michael F. Barry

Michael F. Barry
Chief Executive Officer of Quaker Chemical Corporation

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 June 30, 2016 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: July 27, 2016

/s/ Mary Dean Hall

Mary Dean Hall
Chief Financial Officer of Quaker Chemical Corporation
