

QUAKER CHEMICAL CORP
Form 11-K
June 22, 2017

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

FORM 11-K

[X] ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2016

OR

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

For the transition period from _____ to _____

Commission file number 001-12019

A. Full title of plan and the address of the plan, if different from that of the issuer named below:

Quaker Chemical Corporation

Retirement Savings Plan

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

Quaker Chemical Corporation

One Quaker Park

901 E. Hector Street

Conshohocken, PA 19428-2380

Quaker Chemical Corporation

Retirement Savings Plan

Table of Contents

	Page
	Number
<u>Report of Independent Registered Public Accounting Firm</u> Financial Statements	1
<u>Statements of Net Assets Available for Benefits</u>	2
<u>Statements of Changes in Net Assets Available for Benefits</u>	3
<u>Notes to Financial Statements</u>	4 – 8
Additional Information*	
<u>Schedule I – Schedule of Assets (Held at End of Year)</u>	9
* Other supplemental schedules required by Section 2520.103-10 of the Department of Labor Rules and Regulations for Reporting and Disclosure under ERISA have been omitted because they are not applicable.	
<u>Signature</u>	10
Exhibits	
Exhibit 23 – Consent of Independent Registered Public Accounting Firm	

Report of Independent Registered Public Accounting Firm

To the Plan Administrator

Quaker Chemical Corporation Retirement Savings Plan

Conshohocken, Pennsylvania

We have audited the accompanying statements of net assets available for benefits of the Quaker Chemical Corporation Retirement Savings Plan (the "Plan") as of December 31, 2016 and 2015, and the related statements of changes in net assets available for benefits for the years then ended. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Plan is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the net assets available for benefits of the Plan as of December 31, 2016 and 2015, and the changes in net assets available for benefits for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

The accompanying supplemental Schedule of Assets (Held at End of Year) as of December 31, 2016 has been subjected to audit procedures performed in conjunction with the audit of the Plan's financial statements. The supplemental schedule is the responsibility of the Plan's management. Our audit procedures included determining whether the supplemental schedule reconciles to the financial statements or the underlying accounting and other records, as applicable and performing procedures to test the completeness and accuracy of the information presented in the supplemental schedule. In forming our opinion on the supplemental schedule, we evaluated whether the supplemental schedule, including its form and content, is presented in conformity with the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. In our opinion, the supplemental schedule is fairly stated, in all material respects, in relation to the financial statements as a whole.

/s/ BDO USA, LLP

Philadelphia, Pennsylvania
June 22, 2017

QUAKER CHEMICAL CORPORATION**RETIREMENT SAVINGS PLAN****STATEMENTS OF NET ASSETS AVAILABLE FOR BENEFITS**

	As of December 31,	
	2016	2015
Assets		
Investments:		
Registered investment companies	\$ 70,348,175	\$ 63,655,016
Vanguard Retirement Savings Master Trust	13,028,075	11,187,003
Quaker Chemical Corporation Stock Fund	35,580,116	25,084,402
Participant-directed brokerage account	1,447,368	1,196,181
Total investments	120,403,734	101,122,602
Receivables:		
Employer's contributions	137,169	140,374
Participant notes receivable	1,742,166	1,672,037
Total receivables	1,879,335	1,812,411
Net assets available for benefits	\$ 122,283,069	\$ 102,935,013

The accompanying notes are an integral part of the financial statements

QUAKER CHEMICAL CORPORATION

RETIREMENT SAVINGS PLAN

STATEMENTS OF CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS

	For the Year Ended December 31,	
	2016	2015
Additions		
Investment income (loss):		
Interest and dividend income, investments	\$ 2,510,626	\$ 3,861,630
Net increase (decrease) in fair value of investments	18,747,616	(7,360,470)
Total investment income (loss)	21,258,242	(3,498,840)
Interest income, participant notes receivable	68,462	71,419
Contributions:		
Employer	2,741,340	2,747,149
Participant	4,635,651	4,374,025
Total contributions	7,376,991	7,121,174
Total additions	28,703,695	3,693,753
Deductions		
Payment of benefits	9,355,639	5,024,049
Total deductions	9,355,639	5,024,049
Net increase (decrease)	19,348,056	(1,330,296)
Net assets available for benefits:		
Beginning of year	102,935,013	104,265,309
End of year	\$ 122,283,069	\$ 102,935,013

The accompanying notes are an integral part of the financial statements

Quaker Chemical Corporation

Retirement Savings Plan

Notes to Financial Statements

NOTE 1 – DESCRIPTION OF PLAN

The following description of the Quaker Chemical Corporation Retirement Savings Plan (the “Plan”) provides only general information. The Plan document provides a complete description of the Plan’s provisions.

General

The Plan is a defined contribution plan for certain U.S. employees of Quaker Chemical Corporation (the “Company”) and adopting affiliates (AC Products, Inc. (“AC”), Epmar Corporation (“Epmar”), G.W. Smith & Sons, Inc. (“G.W. Smith”) and Summit Lubricants, Inc. (“Summit”). The Plan is administered by the Global Pension Committee, which is appointed by the Company’s Board of Directors, and is subject to the Employee Retirement Income Security Act of 1974 (“ERISA”).

Employees of the Company and adopting affiliates are eligible to participate in the Plan on their first day of employment or as soon as administratively practicable thereafter, unless specified differently in any bargaining unit agreement.

Plan Amendments

The Plan was amended and restated effective January 1, 2016 to incorporate prior amendments and to exclude certain items from the definition of compensation, including (i) remuneration paid to any participant after the participant ceases to be employed, (ii) amounts realized from the exercise of a stock option and restricted stock dividends, when restricted stock held by an employee is included in the employee’s gross income, (iii) taxable mileage, and (iv) gift cards and other remunerations not received in cash. Prior to that, the Plan was amended and restated in 2015 to incorporate prior amendments and to make certain technical changes.

Contributions

Participants may elect to contribute on a before-tax and/or after-tax basis any whole percentage of their compensation, up to 50%, during the year, not to exceed the annual Internal Revenue Code limits. At the discretion of the Global Pension Committee, the Plan matches 50% of the first 6% of compensation that is contributed to the Plan, with a maximum matching contribution of 3% of compensation. No changes were made to the discretionary matching provision during 2016 or 2015. In addition, the Plan provides for a non-elective nondiscretionary contribution on behalf of participants who have completed one year of service equal to 3% of the eligible participant's compensation. All employer contributions may be allocated to the Company Stock Fund, at the sole discretion of the Global Pension Committee. Participants may diversify these investments of Plan funds that are automatically invested in the Company Stock Fund, subsequent to the employer contributions.

The Company’s Board of Directors (and AC’s Board of Directors with respect to AC participants) reserves the right to make future discretionary non-elective contributions, which are allocated on the basis of eligible participants’ compensation. Upon completing one year of service, an eligible participant is eligible to receive discretionary non-elective contributions on the first day of the month coinciding with or next following the date on which the participant meets the one year of service requirement. Epmar, G.W. Smith and Summit participants are not eligible

for a discretionary non-elective contribution.

Participants who are eligible to make contributions and who have or will attain age 50 before the end of the Plan year are eligible to make catch-up contributions in accordance with, and subject to, the limitations of Internal Revenue Code Section 414(v). No Company matching contributions are made with respect to catch-up contributions.

The Company has made its non-elective nondiscretionary contribution and a portion of its discretionary matching contribution in shares of Company common stock. Non-cash contributions made by the Company were \$2,134,058 and \$2,133,574 in 2016 and 2015, respectively.

Participant Accounts

Each participant's account is credited or deducted with the participant's contribution and any applicable direct expenses and allocation of the Company's contributions and any Plan earnings and losses.

Participant Notes Receivable

Participants may borrow from their fund accounts (other than amounts invested in the Company Stock Fund) an amount limited to the lesser of \$50,000 or 50% of the participant's vested account balance. The loans bear interest at a rate equal to the prevailing rate of interest charged for similar loans by lending institutions in the community (generally the prime rate), plus 1%. The term of each participant loan generally may not exceed five years except for principal residence loans. Interest rates on outstanding participant notes receivable at December 31, 2016 ranged from 4.25% to 4.75%. Principal and interest is paid ratably through periodic payroll deductions. Loan application fees and annual maintenance fees on all outstanding loans are paid by the participant.

Quaker Chemical Corporation

Retirement Savings Plan

Notes to Financial Statements - Continued

Payment of Benefits

Generally, upon separation of service, for any reason, a participant may receive a lump sum amount equal to the value of the participant's account. In addition, a participant may elect to take an in-service distribution from their rollover account prior to reaching age 59 ½, and from all accounts upon reaching age 59 ½. If a participant's vested account balance exceeds \$1,000, the participant may defer payment until the first of the month coincident with or next following attainment of age 65.

Hardship Withdrawals

Participants who are actively employed and who meet certain requirements may take a hardship withdrawal from their elective contributions. Participants who receive a hardship withdrawal will not be eligible to make contributions for six months following the receipt of the hardship withdrawal.

Vesting

Upon entering the Plan, participants are fully vested in Company matching contributions, Company discretionary non-elective contributions, Company nondiscretionary non-elective contributions and employee deferrals plus actual earnings.

Plan Termination

Although it has not expressed any intent to do so, the Company has the right to terminate the Plan subject to the provisions of ERISA. In the event of Plan termination, participants would remain 100% vested.

NOTE 2 – SUMMARY OF ACCOUNTING POLICIES

Basis of Accounting

The Plan's financial statements are prepared on the accrual basis of accounting.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, and changes therein, and disclosure of contingent assets and liabilities. The most significant estimate is the determination of the fair values of the Plan's investments. Actual results could differ from those estimates.

Administration of Plan Assets

The Plan's assets are held by the Trustee of the Plan. Certain administrative functions are performed by officers or employees of the Company. No such officer or employee receives compensation from the Plan. Substantially all administrative expenses, including the Trustee's and audit fees, are paid directly by the Company and are therefore excluded from these financial statements.

Investment Valuation and Income Recognition

The Plan's investments are recorded at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Plan management determines the Plan's valuation policies utilizing information provided by the Trustee. Refer to Note 5 – Fair Value Measures for further information.

Purchases and sales of investments are recorded on a trade-date basis. Net increase (decrease) in fair value of investments includes gains and losses on investments bought and sold during the year as well as unrealized gains and losses on those held at year end. Interest income is accrued when earned. Dividend income is recorded on the ex-dividend date. Capital gain distributions are included in dividend income.

Net investment returns reflect certain fees paid by the investment funds, which include costs for portfolio management, administrative and other services as described in each fund's prospectus. These fees are deducted by the investment funds prior to allocation of the Plan's investment earnings activity and are therefore not separately identified as Plan expenses.

Participant Notes Receivable

Notes receivable from participants are measured at their unpaid principal balance plus any accrued but unpaid interest. Interest income is recorded on the accrual basis. No allowance for credit losses was recorded as of December 31, 2016 or 2015. Delinquent notes receivable from participants are recorded as a benefit payment when the Plan Administrator deems the participant note receivable to be in default based on the terms of the Plan document.

Quaker Chemical Corporation

Retirement Savings Plan

Notes to Financial Statements - Continued

Payment of Benefits

Benefits are recorded when paid.

Recently Issued Accounting Standards

In February 2017, the Financial Accounting Standards Board (“FASB”) issued Accounting Standard Update (“ASU”) No. 2017-06, *Plan Accounting: Defined Benefit Pension Plans (Topic 960), Defined Contribution Pension Plans (Topic 962), Health and Welfare Benefit Plans (Topic 965): Employee Benefit Plan Master Trust Reporting*. The amendments in this update require employee benefit plans to report its interest in a master trust and the change in the value of the interest as separate line items on the statement of net assets available for benefits and the statement of changes in net assets available for benefits, respectively. The update requires a plan to disclose the master trust’s other assets and liabilities, as well as the dollar amount of its interest in these balances. In addition, the amendments in this update remove the requirement to disclose the percentage interest in the master trust for plans with divided interest and requires that a plan disclose the dollar amount of its interest in the general types of investments held by the master trust. The amendments in this update are effective for fiscal years beginning after December 15, 2018 and should be applied on a retrospective basis for the periods presented. Early adoption is permitted. The Plan is still evaluating the impact of this guidance, and has not adopted such.

NOTE 3 – RISKS AND UNCERTAINTIES

Investment securities are exposed to various risks such as interest rate, credit and overall market volatility risks. Due to the risks associated with investment securities, it is possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants’ account balances and the amounts reported in the statements of net assets available for benefits. The Plan therefore provides for investment options in various investment securities, which allows participants to diversify their securities portfolios and mitigate these risks.

NOTE 4 – VANGUARD RETIREMENT SAVINGS MASTER TRUST

The Plan invests in a trust, the Vanguard Retirement Savings Master Trust (“VRSMT”), which is composed of an investment in fully benefit-responsive contracts that are issued by insurance companies and commercial banks and in contracts that are backed by bond funds and trusts that are selected by the Trustee. Contract value, as reported by VRSMT, is the amount participants would receive if they were to initiate a permitted transaction under the terms of the Plan, and also, represents contributions made under the contract, plus earnings, less participant withdrawals. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investment at contract value. Certain events limit the Plan’s ability to transact at contract value, including: 1) Premature termination of the contracts by the Plan; 2) Plan termination; and 3) Bankruptcy of the Plan sponsor. The Plan administrator does not believe that any events that would limit the Plan’s ability to transact at contract value with Plan participants are probable of occurring. Contract issuers may terminate and settle the contracts at other than contract value if there is a change in qualification status of a participant, sponsor or plan, a breach of material obligations under the contract and misrepresentation by the contract holder or failure of the underlying portfolio to conform to pre-established investment guidelines. The VRSMT is valued at the Net Asset Value (“NAV”) in the fair value hierarchy.

NOTE 5 – FAIR VALUE MEASURES

The Plan applies the guidance of the FASB regarding fair value measurements, which establishes a common definition for fair value. Specifically, the guidance utilizes a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The following is a brief description of those three levels:

- Level 1: Observable inputs such as quoted prices (unadjusted) in active markets for identical assets or liabilities.
- Level 2: Inputs other than quoted prices that are observable for the asset or liability, either directly or indirectly. These include quoted prices for similar assets or liabilities in active markets and quoted prices for identical or similar assets or liabilities in markets that are not active.
- Level 3: Unobservable inputs that reflect the reporting entity's own assumptions.

The following is a description of the valuation methodologies used for the investments measured at fair value, including the general classification of such instruments pursuant to the valuation hierarchy:

Registered Investment Companies

The shares of registered investment companies, which represent the NAV of shares held by the Plan, are valued based on quoted market prices on an exchange in an active market and are classified as Level 1 investments.

Quaker Chemical Corporation

Retirement Savings Plan

Notes to Financial Statements - Continued

Common Stock Fund

The common stock fund is comprised of investments in the Quaker Chemical Corporation Stock Fund, which is composed of shares of the Company and uninvested cash. The shares of the Company are traded on an exchange in an active market and are classified as a Level 1 investment.

Participant-Directed Brokerage Account

The participant-directed brokerage account is mainly composed of investments in common stock and registered investment companies, which are valued based on quoted market prices on an exchange in an active market and are classified as Level 1 investments.

The valuation methodologies described above may produce fair value calculations that may not be indicative of net realizable value or reflective of future fair values. Furthermore, while the Plan believes its valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different fair value measurement at the reporting date. There have been no significant changes in methodologies used or transfers between levels during the years ended December 31, 2016 and 2015.

As of December 31, 2016 and 2015, the Plan's investments measured at fair value on a recurring basis were as follows:

		Fair Value Measurements at December 31, 2016			
<u>Assets</u>	Total Fair Value	Using Fair Value Hierarchy			
		Level 1	Level 2	Level 3	
Registered investment companies	\$ 70,348,175	\$ 70,348,175	\$ —	\$ —	—
Common stock fund	35,580,116	35,580,116	—	—	—
Participant-directed brokerage account	1,447,368	1,447,368	—	—	—
Total investments in fair value hierarchy	\$ 107,375,659	\$ 107,375,659	\$ —	\$ —	—
Common/collective trust measured at NAV *	13,028,075	—	—	—	—
Total investments	\$ 120,403,734	\$ 107,375,659	\$ —	\$ —	—

		Fair Value Measurements at December 31, 2015			
<u>Assets</u>	Total Fair Value	Using Fair Value Hierarchy			
		Level 1	Level 2	Level 3	
Registered investment companies	\$ 63,655,016	\$ 63,655,016	\$ —	\$ —	—
Common stock fund	25,084,402	25,084,402	—	—	—
Participant-directed brokerage account	1,196,181	1,196,181	—	—	—
Total investments in fair value hierarchy	\$ 89,935,599	\$ 89,935,599	\$ —	\$ —	—

Common/collective trust measured at NAV *	11,187,003	—	—	—
Total investments	\$ 101,122,602	\$ 89,935,599	\$ —	\$ —

* Certain investments that are measured at fair value using the NAV per share (or its equivalent) have not been classified in the fair value hierarchy. The fair value amounts presented in these tables are intended to permit reconciliation of the fair value hierarchies to the line items presented in the statements of net assets available for benefits.

NOTE 6 – RELATED PARTY AND PARTY-IN-INTEREST TRANSACTIONS

The Plan invests in shares of mutual funds and a collective trust managed by an affiliate of Vanguard Fiduciary Trust Company (“VFTC”). VFTC acts as Trustee for Plan investments. In addition, certain Plan assets are invested in shares of the Quaker Chemical Corporation Stock Fund. As of December 31, 2016 and 2015, the Plan held 278,100 and 324,675 shares of common stock of Quaker Chemical Corporation in the Quaker Chemical Corporation stock fund, respectively. Transactions in such investments qualify as party-in-interest transactions and are exempt from the prohibited transaction rules. Fees incurred by the Plan for investment management services are included in the net increase (decrease) in the fair value of investments.

Participant notes receivable qualify as party-in-interest transactions and are exempt from the prohibited transaction rules.

NOTE 7 – TAX STATUS

The Internal Revenue Service (“IRS”) informed the Company by letter dated September 27, 2012, that the Plan is qualified under Internal Revenue Code (“IRC”) Section 401(a). The Plan has since been amended, however, the Plan administrator continues to believe the Plan is currently designed and being operated in compliance with the applicable requirements of the IRC. The Plan was submitted for a favorable determination letter application on January 29, 2016. The Plan administrator has not identified any

Quaker Chemical Corporation

Retirement Savings Plan

Notes to Financial Statements - Continued

uncertain tax positions which would require adjustment to or disclosure in the Plan's financial statements. The IRS has the ability to examine the Plan's tax return filings for all open tax years, which generally relate to the three prior years; however, there are currently no audits for any tax periods in progress.

NOTE 8 – SUBSEQUENT EVENTS

The Plan was amended and restated effective January 1, 2017 to automatically enroll participants hired on or after January 1, 2017 and to modify participant deferral election amounts. The Plan was further amended and restated to change the investment direction of matching contributions and non-elective contributions by the Company, such that these contributions will be made in cash instead of the Company Stock Fund, and will be invested according to the direction of the participant, beneficiary or alternate payee.

The Plan was amended and restated effective January 1, 2017 to provide service credit for eligible employees of Lubricor Inc. ("Lubricor"), a newly acquired subsidiary of the Company, for service provided prior to November 30, 2016, the acquisition date. However, eligible Lubricor employees who received credit for services were not eligible for the Plan's discretionary non-elective contributions in 2016. In addition, there was no transfer of assets for Lubricor employees into the Plan in 2016.

The Plan was amended and restated effective January 1, 2017 to add ECLI Products, LLC, a subsidiary of the Company, to the Plan as a participating employer.

The Company and the Plan have evaluated subsequent events through the date that these financial statements were available to be issued, and there were no further subsequent events, other than those described above, which would require an adjustment or additional disclosures to the financial statements.

Quaker Chemical Corporation

Retirement Savings Plan

Schedule of Assets (Held at End of Year)

As of December 31, 2016

Quaker Chemical Corporation Retirement Savings Plan, EIN 23-0993790, PN 112

Attachment to Form 5500, Schedule H, Part IV, Line 4i:

(a) (b) Identify of issue, borrower, lessor, or similar party	(c) Description of investment including maturity date, rate of interest, collateral, par, or maturity value	(e) Current Value
Columbia Small Cap Growth Fund, Inc.	Registered Investment Company	\$ 3,185,755
* Vanguard 500 Index Fund Investor Shares	Registered Investment Company	17,051,225
* Vanguard Balanced Index Fund Investor Shares	Registered Investment Company	3,896,434
* Vanguard Extended Market Index Fund Investor Shares	Registered Investment Company	4,818,605
* Vanguard International Growth Fund Investor Shares	Registered Investment Company	3,755,418
* Vanguard Federal Money Market Fund	Registered Investment Company	6,124
* Vanguard Target Retirement 2010 Fund	Registered Investment Company	576,037
* Vanguard Target Retirement 2015 Fund	Registered Investment Company	1,589,643
* Vanguard Target Retirement 2020 Fund	Registered Investment Company	4,088,396
* Vanguard Target Retirement 2025 Fund	Registered Investment Company	4,274,120
* Vanguard Target Retirement 2030 Fund	Registered Investment Company	3,841,852
* Vanguard Target Retirement 2035 Fund	Registered Investment Company	1,555,588
* Vanguard Target Retirement 2040 Fund	Registered Investment Company	1,663,915
* Vanguard Target Retirement 2045 Fund	Registered Investment Company	1,010,106
* Vanguard Target Retirement 2050 Fund	Registered Investment Company	1,040,394
* Vanguard Target Retirement 2055 Fund	Registered Investment Company	464,355
* Vanguard Target Retirement 2060 Fund	Registered Investment Company	72,115
* Vanguard Target Retirement Income	Registered Investment Company	2,044,820
* Vanguard Total Bond Market Index Fund Investor Shares	Registered Investment Company	7,094,685
* Vanguard U.S. Growth Fund Investor Shares	Registered Investment Company	3,985,944
* Vanguard Windsor II Fund Investor Shares	Registered Investment Company	4,332,644

Edgar Filing: QUAKER CHEMICAL CORP - Form 11-K

* Vanguard Brokerage Option	Vanguard Brokerage Option	1,447,368
* Vanguard Retirement Savings Master Trust	Common/Collective Trust	13,028,075
*# Quaker Chemical Corporation	Common Stock Fund	35,580,116
* Participant notes receivable	(4.25% to 4.75%)	1,742,166
		\$ 122,145,900

* Party-in-Interest

Related party

(d) Column (d) is omitted as cost is not required for participant directed investments

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed by the undersigned hereunto duly authorized.

June 22, 2017

Quaker Chemical Corporation Retirement Savings Plan

By:

/s/ Mary Dean Hall

Mary Dean Hall, Vice President, Chief
Financial Officer and Treasurer