

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

FORM 10-Q

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

For the quarterly period ended September 30, 2023

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.)

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.

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$1 par value	KWR	New York Stock Exchange

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

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

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

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
		Emerging growth company	<input type="checkbox"/>

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

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

Number of Shares of Common Stock Outstanding on October 31, 2023

17,984,916

Quaker Chemical Corporation
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PART I
FINANCIAL INFORMATION

Item 1. Financial Statements (Unaudited).

Quaker Chemical Corporation
Condensed Consolidated Statements of Operations
(Unaudited; Dollars in thousands, except per share data)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net sales	\$ 490,612	\$ 492,218	\$ 1,486,204	\$ 1,458,777
Cost of goods sold (excluding amortization expense - See Note 13)	307,265	331,469	951,716	1,002,393
Gross profit	183,347	160,749	534,488	456,384
Selling, general and administrative expenses	122,810	115,456	362,212	343,081
Restructuring and related charges (credits), net	1,019	(1,423)	6,034	(604)
Combination, integration and other acquisition-related expenses	—	2,107	—	7,992
Operating income	59,518	44,609	166,242	105,915
Other (expense) income, net	(2,713)	85	(8,558)	(10,520)
Interest expense, net	(12,781)	(8,389)	(38,744)	(20,228)
Income before taxes and equity in net income of associated companies	44,024	36,305	118,940	75,167
Taxes on income before equity in net income of associated companies	13,593	10,185	36,956	14,425
Income before equity in net income of associated companies	30,431	26,120	81,984	60,742
Equity in net income (loss) of associated companies	3,279	(212)	10,660	(642)
Net income	33,710	25,908	92,644	60,100
Less: Net income attributable to noncontrolling interest	40	41	94	74
Net income attributable to Quaker Chemical Corporation	\$ 33,670	\$ 25,867	\$ 92,550	\$ 60,026
Per share data:				
Net income attributable to Quaker Chemical Corporation common shareholders – basic	\$ 1.87	\$ 1.44	\$ 5.15	\$ 3.35
Net income attributable to Quaker Chemical Corporation common shareholders – diluted	\$ 1.87	\$ 1.44	\$ 5.14	\$ 3.35
Dividends declared	\$ 0.455	\$ 0.435	\$ 1.325	\$ 1.265

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

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income	\$ 33,710	\$ 25,908	\$ 92,644	\$ 60,100
Other comprehensive (loss) income, net of tax				
Currency translation adjustments	(25,504)	(71,986)	(24,116)	(155,284)
Defined benefit retirement plans	281	497	852	2,400
Current period change in fair value of derivatives	1,241	(140)	5,804	1,535
Unrealized (loss) gain on available-for-sale securities	(637)	(818)	938	(2,385)
Other comprehensive loss	(24,619)	(72,447)	(16,522)	(153,734)
Comprehensive income (loss)	9,091	(46,539)	76,122	(93,634)
Less: Comprehensive loss attributable to noncontrolling interest	(36)	(3)	(55)	(5)
Comprehensive income (loss) attributable to Quaker Chemical Corporation	\$ 9,055	\$ (46,542)	\$ 76,067	\$ (93,639)

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

Quaker Chemical Corporation
Condensed Consolidated Balance Sheets
(Unaudited; Dollars in thousands, except par value)

	September 30, 2023	December 31, 2022
ASSETS		
Current assets		
Cash and cash equivalents	\$ 198,358	\$ 180,963
Accounts receivable, net	446,459	472,888
Inventories		
Raw materials and supplies	129,204	151,105
Work-in-process and finished goods	121,566	133,743
Prepaid expenses and other current assets	70,724	55,438
Total current assets	966,311	994,137
Property, plant and equipment, at cost	431,565	428,190
Less: Accumulated depreciation	(235,125)	(229,595)
Property, plant and equipment, net	196,440	198,595
Right of use lease assets	38,595	43,766
Goodwill	504,457	515,008
Other intangible assets, net	890,464	942,925
Investments in associated companies	92,965	88,234
Deferred tax assets	9,569	11,218
Other non-current assets	33,705	27,739
Total assets	\$ 2,732,506	\$ 2,821,622
LIABILITIES AND EQUITY		
Current liabilities		
Short-term borrowings and current portion of long-term debt	\$ 19,246	\$ 19,245
Accounts payable	190,067	193,983
Dividends payable	8,190	7,808
Accrued compensation	43,641	39,834
Accrued restructuring	3,590	5,483
Accrued pension and postretirement benefits	1,574	1,560
Other accrued liabilities	85,799	86,873
Total current liabilities	352,107	354,786
Long-term debt	804,973	933,561
Long-term lease liabilities	22,163	26,967
Deferred tax liabilities	151,606	160,294
Non-current accrued pension and postretirement benefits	27,344	28,765
Other non-current liabilities	33,212	38,664
Total liabilities	1,391,405	1,543,037
Commitments and contingencies (Note 18)		
Equity		
Common stock \$1 par value; authorized 30,000,000 shares; issued and outstanding September 30, 2023 – 18,000,855 shares; December 31, 2022 – 17,950,264 shares	18,001	17,950
Capital in excess of par value	938,473	928,288
Retained earnings	538,628	469,920
Accumulated other comprehensive loss	(154,724)	(138,240)
Total Quaker shareholders' equity	1,340,378	1,277,918
Noncontrolling interest	723	667
Total equity	1,341,101	1,278,585
Total liabilities and equity	\$ 2,732,506	\$ 2,821,622

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

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

	Nine Months Ended September 30,	
	2023	2022
Cash flows from operating activities		
Net income	\$ 92,644	\$ 60,100
Adjustments to reconcile net income to net cash provided by (used in) operating activities:		
Amortization of debt issuance costs	1,059	2,589
Depreciation and amortization	61,434	60,692
Equity in undistributed earnings of associated companies, net of dividends	(7,486)	3,612
Deferred compensation, deferred taxes and other, net	(515)	(8,844)
Share-based compensation	11,189	8,635
Loss on extinguishment of debt	—	5,246
Combination and other acquisition-related expenses, net of payments	—	(4,265)
Restructuring and related charges (credits), net	6,034	(604)
Pension and other postretirement benefits	(2,000)	(6,556)
Increase (decrease) in cash from changes in current assets and current liabilities, net of acquisitions:		
Accounts receivable	22,133	(65,256)
Inventories	30,607	(72,386)
Prepaid expenses and other current assets	(9,771)	(11,081)
Change in restructuring liabilities	(7,914)	(1,234)
Accounts payable and accrued liabilities	2,046	3,059
Net cash provided by (used in) operating activities	<u>199,460</u>	<u>(26,293)</u>
Cash flows from investing activities		
Investments in property, plant and equipment	(25,794)	(20,230)
Payments related to acquisitions, net of cash acquired	—	(9,421)
Proceeds from disposition of assets	—	65
Net cash used in investing activities	<u>(25,794)</u>	<u>(29,586)</u>
Cash flows from financing activities		
Payments of long-term debt	(14,075)	(668,500)
Proceeds from long-term debt	—	750,000
Payments on revolving credit facilities, net	(112,835)	(10,418)
Borrowings on other debt, net	797	2,131
Financing-related debt issuance costs	—	(3,734)
Dividends paid	(23,459)	(22,302)
Other stock related activity	(953)	(616)
Net cash (used in) provided by financing activities	<u>(150,525)</u>	<u>46,561</u>
Effect of foreign exchange rate changes on cash	(5,746)	(16,967)
Net increase (decrease) in cash and cash equivalents	<u>17,395</u>	<u>(26,285)</u>
Cash and cash equivalents at the beginning of the period	180,963	165,176
Cash and cash equivalents at the end of the period	<u>\$ 198,358</u>	<u>\$ 138,891</u>

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

Quaker Chemical Corporation
Condensed Consolidated Statements of Changes in Equity
(Unaudited; Dollars in thousands, except per share amounts)

	Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interest	Total
Balance as of December 31, 2021	\$ 17,897	\$ 917,053	\$ 516,334	\$ (63,990)	\$ 628	\$ 1,387,922
Net income	—	—	19,816	—	5	19,821
Amounts reported in other comprehensive (loss) income	—	—	—	(6,271)	1	(6,270)
Dividends (\$0.415 per share)	—	—	(7,434)	—	—	(7,434)
Share issuance and equity-based compensation plans	15	1,646	—	—	—	1,661
Balance as of March 31, 2022	\$ 17,912	\$ 918,699	\$ 528,716	\$ (70,261)	\$ 634	\$ 1,395,700
Net income	—	—	14,343	—	28	14,371
Amounts reported in other comprehensive loss	—	—	—	(74,985)	(33)	(75,018)
Dividends (\$0.415 per share)	—	—	(7,438)	—	—	(7,438)
Share issuance and equity-based compensation plans	8	2,943	—	—	—	2,951
Balance as of June 30, 2022	\$ 17,920	\$ 921,642	\$ 535,621	\$ (145,246)	\$ 629	\$ 1,330,566
Net income	—	—	25,867	—	41	25,908
Amounts reported in other comprehensive loss	—	—	—	(72,409)	(38)	(72,447)
Dividends (\$0.435 per share)	—	—	(7,803)	—	—	(7,803)
Share issuance and equity-based compensation plans	11	3,395	—	—	—	3,406
Balance as of September 30, 2022	\$ 17,931	\$ 925,037	\$ 553,685	\$ (217,655)	\$ 632	\$ 1,279,630
Balance as of December 31, 2022	\$ 17,950	\$ 928,288	\$ 469,920	\$ (138,240)	\$ 667	\$ 1,278,585
Net income	—	—	29,534	—	7	29,541
Amounts reported in other comprehensive income	—	—	—	15,063	3	15,066
Dividends (\$0.435 per share)	—	—	(7,822)	—	—	(7,822)
Share issuance and equity-based compensation plans	32	1,386	—	—	—	1,418
Balance as of March 31, 2023	\$ 17,982	\$ 929,674	\$ 491,632	\$ (123,177)	\$ 677	\$ 1,316,788
Net income	—	—	29,346	—	47	29,393
Amounts reported in other comprehensive loss	—	—	—	(6,931)	(38)	(6,969)
Dividends (\$0.435 per share)	—	—	(7,830)	—	—	(7,830)
Share issuance and equity-based compensation plans	17	5,267	—	—	—	5,284
Balance as of June 30, 2023	\$ 17,999	\$ 934,941	\$ 513,148	\$ (130,108)	\$ 686	\$ 1,336,666
Net income	—	—	33,670	—	40	33,710
Amounts reported in other comprehensive loss	—	—	—	(24,616)	(3)	(24,619)
Dividends (\$0.455 per share)	—	—	(8,190)	—	—	(8,190)
Share issuance and equity-based compensation plans	2	3,532	—	—	—	3,534
Balance as of September 30, 2023	\$ 18,001	\$ 938,473	\$ 538,628	\$ (154,724)	\$ 723	\$ 1,341,101

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

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

Note 1 – Basis of Presentation and Description of Business

As used in these Notes to Condensed Consolidated Financial Statements of this Quarterly Report on Form 10-Q for the period ended September 30, 2023 (the “Report”), the terms “Quaker Houghton,” the “Company,” “we,” and “our” refer to Quaker Chemical Corporation (doing business as Quaker Houghton), its subsidiaries, and associated companies, unless the context otherwise requires. The “Combination” refers to the legacy Quaker combination with Houghton International, Inc. (“Houghton”).

Basis of Presentation

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, 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 nine months ended September 30, 2023 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, 2022 (the “2022 Form 10-K”).

During the first quarter of 2023, the Company reorganized its executive management team to align with its new business structure. The Company’s new structure includes three reportable segments: (i) Americas; (ii) Europe, Middle East and Africa (“EMEA”); and (iii) Asia/Pacific. Prior to the Company’s reorganization, the Company’s historical reportable segments were: (i) Americas; (ii) EMEA; (iii) Asia/Pacific; and (iv) Global Specialty Businesses. Prior period information has been recast to align with the Company’s business structure as of January 1, 2023, including reportable segments and customer industry disaggregation. As a result of the Company’s new organizational structure effective January 1, 2023, the Company reallocated goodwill previously held by the former Global Specialty Businesses segment to the remaining business segments as of January 1, 2023. However, the Company did not recast the carrying amount of goodwill for the year ended December 31, 2022. See Notes 4, 5, and 13 of Notes to Condensed Consolidated Financial Statements.

Description of Business

The Company was organized in 1918 and incorporated as a Pennsylvania business corporation in 1930. Quaker Houghton is the global leader in industrial process fluids. With a presence around the world, including operations in over 25 countries, the Company’s customers include thousands of the world’s most advanced and specialized steel, aluminum, automotive, aerospace, offshore, container, mining, and metalworking companies. Quaker Houghton develops, produces, and markets a broad range of formulated chemical specialty products and offers chemical management services, which the Company refers to as “Fluidcare™”, for various heavy industrial and manufacturing applications.

Hyper-inflationary economies

Argentina’s and Türkiye’s economies were considered hyper-inflationary under U.S. GAAP effective July 1, 2018 and April 1, 2022, respectively. As of, and for the three and nine months ended September 30, 2023, the Company’s Argentine and Turkish subsidiaries represented a combined 1% and 2% of the Company’s consolidated total assets and net sales, respectively. During the three and nine months ended September 30, 2023, the Company recorded \$1.2 million and \$2.9 million of remeasurement losses associated with the applicable currency conversions, respectively. Comparatively, during the three and nine months ended September 30, 2022, the Company recorded \$1.0 million and \$1.2 million of remeasurement losses associated with the applicable currency conversions, respectively. These losses were recorded within foreign exchange losses, net, which is a component of Other (expense) income, net, in the Company’s Condensed Consolidated Statements of Operations.

Note 2 – Business Acquisitions*Previous Acquisitions*

In October 2022, the Company acquired a business that provides pickling and rinsing products and services, which is part of the EMEA reportable segment, for approximately 3.5 million EUR or approximately \$3.5 million. This acquisition, along with the Company’s January 2022 acquisition in the Americas (described below), which had similar specializations and product offerings in pickling inhibitor technologies, strengthens Quaker Houghton’s position in pickling inhibitors and additives, enabling the Company to better support and optimize production processes for customers across the metals industry. As of September 30, 2023, the allocation of the purchase of this acquisition has been finalized.

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

In January 2022, the Company acquired a business that provides pickling inhibitor technologies, drawing lubricants and stamping oil, and various other lubrication, rust preventative, and cleaner applications, which is part of the Americas reportable segment, for approximately \$8.0 million. This business broadens the Company's product offerings within its existing metals and metalworking business in the Americas region. During the third quarter of 2022 the Company finalized post-closing adjustments that resulted in the Company paying less than \$0.1 million of additional purchase consideration. Also in January 2022, the Company acquired a business related to the sealing and impregnation of metal castings for the automotive sector, as well as impregnation resin and impregnation systems for metal parts, which is part of the EMEA reportable segment, for approximately 1.2 million EUR or approximately \$1.4 million. This business broadens its product offerings and service capabilities within its existing impregnation business. The allocation of the purchase prices of both of these January 2022 acquisitions have been finalized.

In November 2021, the Company acquired Baron Industries, a privately held company that provides vacuum impregnation services of castings, powder metals and electrical components for its Americas reportable segment for \$11.0 million, including an initial cash payment of \$7.1 million, subject to post-closing adjustments, as well as certain earn-out provisions that are payable at various times from 2022 through 2025. The earn-out provisions could total a maximum of \$4.5 million. As of September 30, 2023, the Company has remaining earn-out liabilities recorded on its Condensed Consolidated Balance Sheet of \$1.1 million. Additionally, during the third quarter of 2022 the Company finalized post-closing adjustments that resulted in the Company receiving a payment of less than \$0.1 million.

In December 2020, the Company acquired Coral Chemical Company, LLC ("Coral"), a privately held U.S.-based provider of metal finishing fluid solutions. Subsequent to the acquisition, the Company and the sellers of Coral (the "Sellers") have worked to finalize certain post-closing adjustments. During the second quarter of 2022, after failing to reach resolution, the Sellers filed suit asserting certain amounts owed related to tax attributes of the acquisition. During the first nine months of 2023, there have been no material changes to the facts and circumstances of the claim asserted by the Sellers, and the Company continues to believe the potential range of exposure for this claim is \$0 to \$1.5 million.

Note 3 – Recently Issued Accounting Standards

There have been no recently issued accounting standards that will have a material impact on the Company's condensed consolidated financial statements and related footnote disclosures.

Note 4 – Business Segments

The Company has three reportable segments: (i) Americas; (ii) EMEA; and (iii) Asia/Pacific. The three segments are composed of the net sales and operations in each respective region. All prior period information has been recast to reflect the Company's new reportable segments. See Note 1 of Notes to Condensed Consolidated Financial Statements.

Segment operating earnings for each of the Company's reportable segments are comprised of the segment's net sales less directly related Cost of goods sold ("COGS") and Selling, general and administrative expenses ("SG&A"). Operating expenses not directly attributable to the net sales of each respective segment, such as certain corporate and administrative costs, Combination, integration and other acquisition-related expenses, and Restructuring and related charges (credits), net, are not included in segment operating earnings. Other items not specifically identified with the Company's reportable segments include Interest expense, net and Other (expense) income, net.

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

The following table presents information about the performance of the Company's reportable segments:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net sales				
Americas	\$ 245,899	\$ 254,678	\$ 750,531	\$ 702,580
EMEA	139,620	134,386	435,602	426,739
Asia/Pacific	105,093	103,154	300,071	329,458
Total net sales	\$ 490,612	\$ 492,218	\$ 1,486,204	\$ 1,458,777
Segment operating earnings				
Americas	\$ 69,148	\$ 66,749	\$ 204,280	\$ 164,065
EMEA	27,922	15,479	81,076	58,803
Asia/Pacific	30,963	26,723	86,604	76,146
Total segment operating earnings	128,033	108,951	371,960	299,014
Combination, integration and other acquisition-related expenses	—	(2,107)	—	(7,992)
Restructuring and related (charges) credits, net	(1,019)	1,423	(6,034)	604
Non-operating and administrative expenses	(52,280)	(47,852)	(154,001)	(139,894)
Depreciation of corporate assets and amortization	(15,216)	(15,806)	(45,683)	(45,817)
Operating income	59,518	44,609	166,242	105,915
Other (expense) income, net	(2,713)	85	(8,558)	(10,520)
Interest expense, net	(12,781)	(8,389)	(38,744)	(20,228)
Income before taxes and equity in net income of associated companies	\$ 44,024	\$ 36,305	\$ 118,940	\$ 75,167

The following table summarizes inter-segment revenues. All inter-segment transactions have been eliminated from each reportable segment's net sales and earnings for all periods presented in the above tables.

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Americas	\$ 1,772	\$ 2,702	\$ 6,778	\$ 9,200
EMEA	5,161	9,448	18,718	37,259
Asia/Pacific	793	327	1,329	739

Note 5 – Net Sales and Revenue Recognition

Arrangements Resulting in Net Reporting

As part of the Company's Fluidcare™ business, certain third-party product sales to customers are managed by the Company. The Company transferred third-party products under arrangements recognized on a net reporting basis of \$21.6 million and \$63.2 million for the three and nine months ended September 30, 2023, respectively, and \$21.4 million and \$61.7 million for the three and nine months ended September 30, 2022, respectively.

Customer Concentration

A significant portion of the Company's revenues are realized from the sale of process fluids and services to manufacturers of steel, aluminum, automobiles, aerospace, industrial and agricultural equipment, and durable goods. As previously disclosed in the Company's 2022 Form 10-K, the Company's five largest customers combined (each composed of multiple subsidiaries or divisions with semiautonomous purchasing authority) accounted for approximately 11% of consolidated net sales, with its largest customer accounting for approximately 3% of consolidated net sales.

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

Contract Assets and Liabilities

The Company had no material contract assets recorded on its Condensed Consolidated Balance Sheets as of September 30, 2023 or December 31, 2022.

The Company had approximately \$2.8 million and \$5.7 million of deferred revenue as of September 30, 2023 and December 31, 2022, respectively. For the nine months ended September 30, 2023, the Company satisfied all of the associated performance obligations and recognized into revenue the advance payments received and recorded as of December 31, 2022.

Disaggregated Revenue

The Company sells its various industrial process fluids, its specialty chemicals and its technical expertise as a global product portfolio. The Company generally manages and evaluates its performance by reportable segment first, and then by customer industries. Net sales of each of the Company's major product lines are generally spread throughout all three of the Company's geographic regions, and in most cases, are approximately proportionate to the level of total sales in each region.

The following tables disaggregate the Company's net sales by geographic region, customer industries, and timing of revenue recognized. Prior period information has been recast to reflect the Company's current period customer industry disaggregation. See Note 1 of Notes to Condensed Consolidated Financial Statements.

Three Months Ended September 30, 2023

	Americas	EMEA	Asia/Pacific	Consolidated Total
Customer Industries				
Metals	\$ 67,957	\$ 32,630	\$ 49,320	\$ 149,907
Metalworking and other	177,942	106,990	55,773	340,705
	<u>\$ 245,899</u>	<u>\$ 139,620</u>	<u>\$ 105,093</u>	<u>\$ 490,612</u>

Timing of Revenue Recognized

Product sales at a point in time	\$ 235,209	\$ 128,586	\$ 102,305	\$ 466,100
Services transferred over time	10,690	11,034	2,788	24,512
	<u>\$ 245,899</u>	<u>\$ 139,620</u>	<u>\$ 105,093</u>	<u>\$ 490,612</u>

Nine Months Ended September 30, 2023

	Americas	EMEA	Asia/Pacific	Consolidated Total
Customer Industries				
Metals	\$ 204,834	\$ 104,376	\$ 144,109	\$ 453,319
Metalworking and other	545,697	331,226	155,962	1,032,885
	<u>\$ 750,531</u>	<u>\$ 435,602</u>	<u>\$ 300,071</u>	<u>\$ 1,486,204</u>

Timing of Revenue Recognized

Product sales at a point in time	\$ 718,187	\$ 402,508	\$ 291,740	\$ 1,412,435
Services transferred over time	32,344	33,094	8,331	73,769
	<u>\$ 750,531</u>	<u>\$ 435,602</u>	<u>\$ 300,071</u>	<u>\$ 1,486,204</u>

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

	Three Months Ended September 30, 2022			
	Americas	EMEA	Asia/Pacific	Consolidated Total
Customer Industries				
Metals	\$ 67,943	\$ 32,748	\$ 51,341	\$ 152,032
Metalworking and other	186,735	101,638	51,813	340,186
	\$ 254,678	\$ 134,386	\$ 103,154	\$ 492,218

Timing of Revenue Recognized				
Product sales at a point in time	\$ 243,699	\$ 124,566	\$ 99,929	\$ 468,194
Services transferred over time	10,979	9,820	3,225	24,024
	\$ 254,678	\$ 134,386	\$ 103,154	\$ 492,218

	Nine Months Ended September 30, 2022			
	Americas	EMEA	Asia/Pacific	Consolidated Total
Customer Industries				
Metals	\$ 185,784	\$ 107,163	\$ 163,239	\$ 456,186
Metalworking and other	516,796	319,576	166,219	1,002,591
	\$ 702,580	\$ 426,739	\$ 329,458	\$ 1,458,777

Timing of Revenue Recognized				
Product sales at a point in time	\$ 669,945	\$ 396,944	\$ 321,031	\$ 1,387,920
Services transferred over time	32,635	29,795	8,427	70,857
	\$ 702,580	\$ 426,739	\$ 329,458	\$ 1,458,777

Note 6 - Leases

The Company has operating leases for certain facilities, vehicles and machinery and equipment with remaining lease terms up to 8 years. Operating lease expense is recognized on a straight-line basis over the lease term. In addition, the Company has certain land use leases with remaining lease terms up to 92 years.

The Company had no material variable lease costs, sublease income, or finance leases for the three and nine months ended September 30, 2023 and 2022. The components of the Company's lease expense are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Operating lease expense	\$ 3,886	\$ 3,664	\$ 11,532	\$ 10,592
Short-term lease expense	193	201	587	625

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

Supplemental cash flow information related to the Company's leases is as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Cash paid for amounts included in the measurement of lease liabilities:				
Operating cash flows from operating leases	\$ 3,917	\$ 3,768	\$ 11,547	\$ 10,575
Non-cash lease liabilities activity:				
Leased assets obtained in exchange for new operating lease liabilities	2,910	2,599	6,566	10,672

Supplemental balance sheet information related to the Company's leases is as follows:

	September 30, 2023	December 31, 2022
Right of use lease assets	\$ 38,595	\$ 43,766
Other current liabilities	12,113	12,024
Long-term lease liabilities	22,163	26,967
Total operating lease liabilities	<u>\$ 34,276</u>	<u>\$ 38,991</u>
Weighted average remaining lease term (years)	4.82	5.10
Weighted average discount rate	4.67 %	4.36 %

Maturities of operating lease liabilities were as follows:

	September 30, 2023
For the remainder of 2023	\$ 3,691
For the year ended December 31, 2024	12,589
For the year ended December 31, 2025	8,417
For the year ended December 31, 2026	6,286
For the year ended December 31, 2027	3,051
For the year ended December 31, 2028 and beyond	5,614
Total lease payments	39,648
Less: imputed interest	(5,372)
Present value of lease liabilities	<u>\$ 34,276</u>

Note 7 – Restructuring and Related Activities

In the third quarter of 2019, the Company's management approved a global restructuring plan (the "QH Program") as part of its initial plan to realize certain cost synergies associated with the Combination. As of December 31, 2022, the Company substantially completed all of the initiatives under the QH Program with only an immaterial amount of remaining severance still to be paid, which has been paid as of September 30, 2023.

In the fourth quarter of 2022, the Company's management initiated a global cost and optimization program to improve its cost structure and drive a more profitable and productive organization. As of September 30, 2023, the program included restructuring and associated severance costs to reduce headcount by approximately 100 positions globally. These headcount reductions began in the fourth quarter of 2022 and are expected to continue throughout 2023. The exact timing to complete all actions and final costs associated will depend on a number of factors that are subject to change.

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

Employee separation benefits vary depending on local regulations within certain foreign countries and include severance and other benefits. Restructuring costs include severance costs to reduce headcount, including customary and routine adjustments to initial estimates for employee separation costs, as well as costs to close certain facilities under the QH Program. These costs are recorded in Restructuring and related charges in the Company's Consolidated Statements of Operations. As described in Note 4 of Notes to Consolidated Financial Statements, Restructuring and related charges are not included in the Company's calculation of reportable segments' measure of operating earnings and therefore these costs are not reviewed by or recorded to reportable segments.

In connection with the plans for closure of certain manufacturing and non-manufacturing facilities, the Company has made available for sale certain facilities and property. During the three months ended September 30, 2023, the Company classified certain properties with aggregate book value of approximately \$6.9 million as held-for-sale that are recorded in Prepaid expenses and other current assets on the Company's Condensed Consolidated Balance Sheets. The Company expects to complete the sale of these properties over the next 12 months.

Changes in the Company's accruals for its restructuring programs are as follows:

	Restructuring Programs
Accrued restructuring as of December 31, 2022	\$ 5,483
Restructuring and related charges, net	6,034
Cash payments	(7,914)
Currency translation adjustments	(13)
Accrued restructuring as of September 30, 2023	\$ 3,590

Note 8 – Share-Based Compensation

The Company recognized the following share-based compensation expense in its Condensed Consolidated Statements of Operations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Stock options	\$ 203	\$ 533	\$ 837	\$ 1,269
Non-vested stock awards and restricted stock units	2,429	1,783	7,192	4,998
Director stock ownership plan	30	9	56	53
Performance stock units	1,113	875	3,104	2,314
Total share-based compensation expense	\$ 3,775	\$ 3,200	\$ 11,189	\$ 8,634

Share-based compensation expense is recorded in SG&A, except for \$0.1 million and \$0.2 million for the three and nine months ended September 30, 2022, respectively, recorded within Combination, integration and other acquisition-related expenses.

Stock Options

As of September 30, 2023, unrecognized compensation expense related to unvested stock options was \$0.5 million, to be recognized over a weighted average remaining period of 0.9 years.

Restricted Stock Awards and Restricted Stock Units

During the nine months ended September 30, 2023, the Company granted 38,894 non-vested restricted shares and 6,675 non-vested restricted stock units under its long-term incentive plan ("LTIP"), which are subject to time-based vesting, generally over one to three years. The fair value of these grants is based on the last sale price of the Company's common stock on the date of grant. As of September 30, 2023, unrecognized compensation expense related to the non-vested restricted shares was \$8.0 million, to be recognized over a weighted average remaining period of 1.4 years, and unrecognized compensation expense related to non-vested restricted stock units was \$1.6 million, to be recognized over a weighted average remaining period of 1.5 years.

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

Performance Stock Units

As a component of its LTIP, the Company grants performance-based stock unit awards (“PSUs”), which will be settled in a certain number of shares subject to market-based or performance-based and time-based vesting conditions. The number of fully vested shares that may ultimately be issued as settlement for each award may range from 0% up to 200% of the target award, subject to the achievement of the Company’s market-based total shareholder return (“TSR”) metric relative to the performance of the Company’s peer group, the S&P Midcap 400 Materials group, and separately the achievement of a performance-based return on invested capital (“ROIC”) measure. The service period required for the PSUs is generally three years and the measurement period of the market-based and performance objectives is generally from January 1 of the year of grant through December 31 of the year prior to issuance of the shares.

Compensation expense for PSUs is measured based on the grant date fair value and is recognized on a straight-line vesting method basis over the applicable vesting period. The fair value of PSUs granted with a ROIC condition is based on the trading price of the Company’s common stock on the date of grant. PSUs granted with a relative TSR condition are valued using a Monte Carlo simulation on the date of grant. The grant-date fair value of the PSUs valued using a Monte Carlo simulation, which included the following assumptions set forth in the table below:

	2023 Grants
Number of PSUs granted	16,861
Risk-free interest rate	3.85%
Dividend yield	0.96%
Expected term (years)	3.0

Based on the conditions of the PSUs and performance to date for each of the outstanding PSU awards as of September 30, 2023, the Company estimates that it will issue 25,613 fully vested shares as of the applicable settlement date for such outstanding PSUs awards. As of September 30, 2023, there was approximately \$8.0 million of total unrecognized compensation cost related to PSUs, which the Company expects to recognize over a weighted-average period of 2.2 years.

Note 9 – Pension and Other Postretirement Benefits

The components of net periodic benefit cost (income) are as follows:

	Three Months Ended September 30,				Nine Months Ended September 30,			
	Pension Benefits		Other Postretirement Benefits		Pension Benefits		Other Postretirement Benefits	
	2023	2022	2023	2022	2023	2022	2023	2022
Service cost	\$ 109	\$ 166	\$ —	\$ 1	\$ 320	\$ 520	\$ —	\$ 1
Interest cost	2,487	1,272	14	8	7,452	3,949	51	19
Expected return on plan assets	(2,033)	(1,942)	—	—	(6,056)	(6,038)	—	—
Actuarial loss (gain) amortization	103	238	(36)	(23)	308	743	(95)	(70)
Prior service cost (income) amortization	18	3	(4)	(8)	26	8	(12)	(17)
Net periodic benefit cost (income)	<u>\$ 684</u>	<u>\$ (263)</u>	<u>\$ (26)</u>	<u>\$ (22)</u>	<u>\$ 2,050</u>	<u>\$ (818)</u>	<u>\$ (56)</u>	<u>\$ (67)</u>

In July 2023, one of the Company’s pension plans in the U.K. liquidated approximately \$50 million of its invested assets and subsequently funded and entered into an insurance annuity contract, which will provide for the pension plan’s defined benefit obligations to participants.

Employer Contributions

As of September 30, 2023, \$3.4 million and \$0.1 million of contributions have been made to the Company’s U.S. and foreign pension plans and its other postretirement benefit plans, respectively. Taking into consideration current minimum cash contribution requirements, the Company currently expects to make full year cash contributions of approximately \$5.2 million to its U.S. and foreign pension plans and approximately \$0.2 million to its other postretirement benefit plans in 2023.

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

Note 10 – Other (expense) income, net

The components of Other (expense) income, net are as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Income from third party license fees	\$ 245	\$ 253	\$ 891	\$ 906
Foreign exchange losses, net	(2,498)	(1,928)	(10,049)	(5,859)
(Loss) gain on disposals of property, plant, equipment and other assets, net	(25)	48	(91)	33
Non-income tax refunds and other related credits (expense)	91	122	1,339	(1,617)
Pension and postretirement benefit (costs) income, non-service components	(549)	452	(1,674)	1,406
Facility remediation recoveries, net	—	1,104	1,014	1,104
Loss on extinguishment of debt	—	—	—	(6,763)
Other non-operating income, net	23	34	12	270
Total other (expense) income, net	\$ (2,713)	\$ 85	\$ (8,558)	\$ (10,520)

Non-income tax refunds and other related credits (expense) during the nine months ended September 30, 2023 and nine months ended September 30, 2022 include adjustments to a Combination-related indemnification asset associated with the settlement of certain income tax audits for tax periods prior to August 1, 2019. See Note 11 of Notes to Condensed Consolidated Financial Statements.

Facility remediation recoveries, net, during the nine months ended September 30, 2023 and the three and nine months ended September 30, 2022, reflect gains recorded on the payments received from insurers related to previously incurred costs from the remediation and restoration of property damage incurred during the three months ended September 30, 2021. See Note 18 of Notes to the Condensed Consolidated Financial Statements.

Loss on extinguishment of debt during the nine months ended September 30, 2022, represents a write-off of certain previously unamortized deferred financing costs as well as a portion of third party and creditor debt issuance costs incurred to execute an amendment to the Company's primary credit facility. See Note 14 of Notes to Condensed Consolidated Financial Statements.

Note 11 – Income Taxes and Uncertain Income Tax Positions

The Company's effective tax rates for the three and nine months ended September 30, 2023 were 30.9% and 31.1%, respectively, compared to 28.1% and 19.2% for the three and nine months ended September 30, 2022, respectively. The Company's effective tax rate for the three months ended September 30, 2023 was primarily impacted by foreign tax inclusions, withholding taxes, return to provision adjustments, the impact of U.S. Department of Treasury guidance on the usage of foreign tax credits, and the mix of earnings. The effective tax rate for the first nine months of 2023 was further impacted by various other items including changes to the valuation allowance for and the usage of foreign tax credits due to an enacted law change in Brazil, and share-based compensation. Comparatively, the prior year effective tax rates were largely impacted by foreign tax inclusions, changes in the valuation allowance for foreign tax credits, the impact of audit settlements, a reduction in reserves for uncertain tax positions, withholding taxes, and the impact of forecasted earnings and the mix of such earnings. In addition, the Company's effective tax rates for three and nine months ended September 30, 2022 were impacted by the Company recording earnings of one of its subsidiaries at a statutory tax rate of 25% while the recertification of its concessionary 15% tax rate was pending receipt.

As previously reported, Houghton Italia, S.r.l was involved in a corporate income tax audit with the Italian tax authorities covering tax years 2014 through 2018. The Company settled all years 2014 through 2018 for \$3.7 million and, accordingly, released all reserves relating to this audit for the settled tax years during the first quarter of 2022. The settlement is to be paid via installments through 2026 and, through September 30, 2023, the Company has paid \$1.5 million of such installments. Having received approximately \$1.2 million from escrow during the quarter, the Company has a remaining indemnification receivable of \$3.2 million in connection with its claim against the former owners of Houghton for any pre-Combination tax liabilities arising from this matter, as well as other audit settlements and tax matters.

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

In the first quarter of 2023, the Company was notified by the Spanish tax authorities of audits to commence for several of its legal entities operating in Spain and spanning tax years 2018 through 2021. In addition, in July 2023, the Company was notified by the Italian tax authorities of an audit to commence for one of the Company's Italian subsidiaries for tax year 2019. Both of these audit proceedings are ongoing and the Company has been providing documentation in response to all of their inquiries. The Company has not established any reserves for these matters at this time.

Note 12 – Earnings Per Share

The following table summarizes earnings per share calculations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Basic earnings per common share				
Net income attributable to Quaker Chemical Corporation	\$ 33,670	\$ 25,867	\$ 92,550	\$ 60,026
Less: income allocated to participating securities	(164)	(115)	(464)	(250)
Net income available to common shareholders	\$ 33,506	\$ 25,752	\$ 92,086	\$ 59,776
Basic weighted average common shares outstanding	17,908,754	17,847,305	17,889,444	17,835,976
Basic earnings per common share	\$ 1.87	\$ 1.44	\$ 5.15	\$ 3.35
Diluted earnings per common share				
Net income attributable to Quaker Chemical Corporation	\$ 33,670	\$ 25,867	\$ 92,550	\$ 60,026
Less: income allocated to participating securities	(164)	(115)	(464)	(250)
Net income available to common shareholders	\$ 33,506	\$ 25,752	\$ 92,086	\$ 59,776
Basic weighted average common shares outstanding	17,908,754	17,847,305	17,889,444	17,835,976
Effect of dilutive securities	12,520	12,566	16,709	15,465
Diluted weighted average common shares outstanding	17,921,274	17,859,871	17,906,153	17,851,441
Diluted earnings per common share	\$ 1.87	\$ 1.44	\$ 5.14	\$ 3.35

Certain stock options, restricted stock units, and PSUs are not included in the diluted earnings per share calculation when the effect would have been anti-dilutive. The calculated amount of anti-diluted shares not included were 11,598 and 10,453 for the three and nine months ended September 30, 2023, respectively, and 25,896 and 24,618 for the three and nine months ended September 30, 2022, respectively.

Note 13 – Goodwill and Other Intangible Assets

The Company completes its annual goodwill and indefinite-lived intangible asset impairment test during the fourth quarter of each year, or more frequently if triggering events indicate a possible impairment. The Company continually evaluates financial performance, economic conditions and other recent developments, including rising interest rates and the cost of capital among other factors, in assessing if a triggering event indicates that the carrying values of goodwill, indefinite-lived, or long-lived assets are impaired. The Company concluded that during the third quarter the ongoing financial, economic or geopolitical conditions did not represent a triggering event.

In connection with the Company's reorganization and the associated change in reportable segments and reporting units during the first quarter of 2023, the Company performed the required impairment assessments directly before and immediately after the change in reporting units and concluded that it was not more likely than not that the fair values of any of the Company's previous or new reporting units were less than their respective carrying amounts.

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

Changes in the carrying amount of goodwill were as follows. Prior period information has been recast to reflect the Company's current period reportable segments. See Note 1 of Notes to Condensed Consolidated Financial Statements.

	Americas	EMEA	Asia/Pacific	Global Specialty Businesses	Total
Balance as of December 31, 2022	\$ 215,899	\$ 34,567	\$ 150,375	\$ 114,167	\$ 515,008
Reallocation of reporting units	63,697	31,711	18,759	(114,167)	—
Balance as of January 1, 2023	279,596	66,278	169,134	—	515,008
Currency translation adjustments	2,561	(805)	(12,307)	—	(10,551)
Balance as of September 30, 2023	<u>\$ 282,157</u>	<u>\$ 65,473</u>	<u>\$ 156,827</u>	<u>\$ —</u>	<u>\$ 504,457</u>

Gross carrying amounts and accumulated amortization for definite-lived intangible assets were as follows:

	Gross Carrying Amount		Accumulated Amortization		Net Book Value	
	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022	September 30, 2023	December 31, 2022
Customer lists and rights to sell	\$ 824,893	\$ 831,600	\$ 226,956	\$ 191,286	\$ 597,937	\$ 640,314
Trademarks, formulations and product technology	157,362	158,564	52,534	46,281	104,828	112,283
Other	5,854	7,576	5,734	6,390	120	1,186
Total definite-lived intangible assets	<u>\$ 988,109</u>	<u>\$ 997,740</u>	<u>\$ 285,224</u>	<u>\$ 243,957</u>	<u>\$ 702,885</u>	<u>\$ 753,783</u>

The Company amortizes definite-lived intangible assets on a straight-line basis over their useful lives. The Company recorded amortization expense as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Amortization expense	<u>\$ 14,529</u>	<u>\$ 14,102</u>	<u>\$ 43,734</u>	<u>\$ 43,343</u>

Estimated annual aggregate amortization expense for the current year and subsequent five years and beyond is as follows:

For the remainder of 2023	\$ 13,455
For the year ended December 31, 2024	56,630
For the year ended December 31, 2025	55,942
For the year ended December 31, 2026	55,650
For the year ended December 31, 2027	55,309

As of September 30, 2023 and December 31, 2022, the Company had indefinite-lived intangible assets for trademarks and tradenames totaling \$187.6 million and \$189.1 million, respectively.

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

Note 14 – Debt

The following table sets forth the components of the Company’s debt:

	As of September 30, 2023		As of December 31, 2022	
	Interest Rate	Outstanding Balance	Interest Rate	Outstanding Balance
Credit Facilities:				
Revolver	6.0%	\$ 82,838	5.2%	\$ 195,673
U.S. Term Loan	6.7%	585,000	5.7%	596,250
Euro Term Loan	5.0%	146,918	3.1%	151,572
Industrial development bonds	5.3%	10,000	5.3%	10,000
Bank lines of credit and other debt obligations	Various	1,120	Various	1,303
Total debt		\$ 825,876		\$ 954,798
Less: debt issuance costs		(1,657)		(1,992)
Less: short-term and current portion of long-term debts		(19,246)		(19,245)
Total long-term debt		\$ 804,973		\$ 933,561

Credit facilities

During June 2022, the Company, and its wholly owned subsidiary, Quaker Houghton B.V., as borrowers, Bank of America, N.A., as administrative agent, U.S. dollar swing line lender and letter of credit issuer, Bank of America Europe Designated Active Company, as Euro Swing Line Lender, certain guarantors and other lenders entered into an amendment to its primary credit facility. The amended credit facility (the “Credit Facility”) established (A) a \$150.0 million Euro equivalent senior secured term loan (the “Euro Term Loan”), (B) a \$600.0 million senior secured term loan (the “U.S. Term Loan”), and (C) a \$500.0 million senior secured revolving credit facility (the “Revolver”), each maturing in June 2027. The Company has the right to increase the amount of the Credit Facility by an aggregate amount not to exceed the greater of \$300.0 million or 100% of Consolidated EBITDA, subject to certain conditions including the agreement to provide financing by any lender providing such increase.

As of September 30, 2023, the Company was in compliance with all of the Credit Facility covenants. See Note 20 of Notes to Consolidated Financial Statements in the Company’s 2022 Form 10-K.

The weighted average variable interest rates incurred on the outstanding borrowings under the Credit Facility during the three and nine months ended September 30, 2023 were approximately 6.4% and 6.1%, respectively. As of September 30, 2023, the interest rate on the outstanding borrowings under the Credit Facility was approximately 6.3%. As part of the Credit Facility, in addition to paying interest on outstanding principal, the Company is also required to pay an annual commitment fee ranging from 0.150% to 0.275% related to unutilized commitments under the Revolver, depending on the Company’s consolidated net leverage ratio. The Company had unused capacity under the Revolver of approximately \$414 million, which is net of bank letters of credit of approximately \$3 million, as of September 30, 2023.

In order to manage the Company’s exposure to variable interest rate risk associated with the Credit Facility, in the first quarter of 2023, the Company entered into \$300.0 million notional amounts of three year interest rate swaps to convert a portion of the Company’s variable rate borrowings to an average fixed rate of 3.64% plus an applicable margin as provided in the Credit Facility based on the Company’s consolidated net leverage ratio. As of September 30, 2023, the aggregate interest rate on the swaps, including the fixed base rate plus the applicable margin, was 5.3%. See Note 17 of Notes to Condensed Consolidated Financial Statements.

In connection with executing the original credit facility in 2019 and the amended Credit Facility during the second quarter of 2022, the Company capitalized an aggregate of \$2.2 million of certain third-party and creditor debt issuance costs. Approximately \$0.7 million of the capitalized costs were attributed to the Euro Term Loan and U.S. Term Loan. These costs were recorded as a direct offset of Long-term debt on the Condensed Consolidated Balance Sheet. Approximately \$1.5 million of the capitalized costs were attributed to the Revolver and recorded within Other assets on the Condensed Consolidated Balance Sheet. These capitalized costs will collectively be amortized into Interest expense over the five year term of the Credit Facility. As of September 30, 2023, the Company had \$1.7 million of debt issuance costs recorded as an offset of Long-term debt on the Condensed Consolidated Balance Sheet and \$3.6 million of debt issuance costs recorded within Other assets on the Condensed Consolidated Balance Sheet. Comparatively, as of December 31, 2022, the Company had \$2.0 million of debt issuance costs recorded as an offset of Long-term debt on the Condensed Consolidated Balance Sheet and \$4.3 million of debt issuance costs recorded within Other assets on the Condensed Consolidated Balance Sheet.

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

Industrial development bonds

As of September 30, 2023 and December 31, 2022, the Company had fixed rate, industrial development authority bonds totaling \$10.0 million in principal amount due in 2028. These bonds have similar covenants to the Credit Facility noted above.

Bank lines of credit and other debt obligations

The Company has certain unsecured bank lines of credit and discounting facilities in certain foreign subsidiaries, which are not collateralized. The Company's other debt obligations primarily consist of certain domestic and foreign low interest rate or interest-free municipality-related loans, local credit facilities of certain foreign subsidiaries, and capital lease obligations. Total unused capacity under these arrangements as of September 30, 2023 was approximately \$34 million.

In addition to the bank letters of credit described in the "Credit facilities" subsection above, the Company's other off-balance sheet arrangements include certain financial and other guarantees. The Company's total bank letters of credit and guarantees outstanding as of September 30, 2023 were approximately \$5 million.

Interest expense, net

The Company incurred the following debt related expenses included within Interest expense, net, in the Condensed Consolidated Statements of Operations:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Interest expense	\$ 12,598	\$ 9,465	\$ 40,863	\$ 20,339
Amortization of debt issuance costs	353	353	1,059	2,589
Total	\$ 12,951	\$ 9,818	\$ 41,922	\$ 22,928

Based on the variable interest rates associated with the Credit Facility, as of September 30, 2023 and as of December 31, 2022, the amounts at which the Company's total debt were recorded are not materially different from their fair market value.

Note 15 – Accumulated Other Comprehensive Income

The following tables show the reclassifications from and resulting balances of accumulated other comprehensive income ("AOCI"):

	Currency Translation Adjustments	Defined Benefit Pension Plans	Unrealized (Loss) Gain in Available-for- Sale Securities	Derivative Instruments	Total
Balance at June 30, 2023	\$ (130,738)	\$ (4,024)	\$ 91	\$ 4,563	\$ (130,108)
Other comprehensive (loss) income before Reclassifications	(25,501)	304	(802)	1,612	(24,387)
Amounts reclassified from AOCI	—	71	(4)	—	67
Related tax amounts	—	(94)	169	(371)	(296)
Balance at September 30, 2023	\$ (156,239)	\$ (3,743)	\$ (546)	\$ 5,804	\$ (154,724)
Balance at June 30, 2022	\$ (133,110)	\$ (11,269)	\$ (1,170)	\$ 303	\$ (145,246)
Other comprehensive (loss) income before Reclassifications	(71,948)	453	(1,006)	(182)	(72,683)
Amounts reclassified from AOCI	—	210	(30)	—	180
Related tax amounts	—	(166)	218	42	94
Balance at September 30, 2022	\$ (205,058)	\$ (10,772)	\$ (1,988)	\$ 163	\$ (217,655)

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

	Currency Translation Adjustments	Defined Benefit Pension Plans	Unrealized (Loss) Gain in Available-for- Sale Securities	Derivative Instruments	Total
Balance as of December 31, 2022	\$ (132,161)	\$ (4,595)	\$ (1,484)	\$ —	\$ (138,240)
Other comprehensive income (loss) before reclassifications	(24,078)	915	640	7,538	(14,985)
Amounts reclassified from AOCI	—	225	547		772
Related tax amounts	—	(288)	(249)	(1,734)	(2,271)
Balance as of September 30, 2023	<u>\$ (156,239)</u>	<u>\$ (3,743)</u>	<u>\$ (546)</u>	<u>\$ 5,804</u>	<u>\$ (154,724)</u>
Balance as of December 31, 2021	\$ (49,843)	\$ (13,172)	\$ 397	\$ (1,372)	\$ (63,990)
Other comprehensive (loss) income before reclassifications	(155,215)	2,535	(3,326)	1,993	(154,013)
Amounts reclassified from AOCI	—	657	306	—	963
Related tax amounts	—	(792)	635	(458)	(615)
Balance as of September 30, 2022	<u>\$ (205,058)</u>	<u>\$ (10,772)</u>	<u>\$ (1,988)</u>	<u>\$ 163</u>	<u>\$ (217,655)</u>

All reclassifications related to unrealized (loss) gain in available-for-sale securities relate to the Company's equity interest in a captive insurance company and are recorded in equity in net income of associated companies. The amounts reported in other comprehensive income for noncontrolling interest are related to currency translation adjustments.

Note 16 – Fair Value Measurements

The Company has valued its company-owned life insurance policies at fair value. During June 2023, the Company surrendered and liquidated \$1.9 million of these life insurance policies. The fair values of Company-owned life insurance assets are based on quotes for like instruments with similar credit ratings and terms. These assets are subject to fair value measurement as follows:

Assets	Total Fair Value	Fair Value Measurements as of September 30, 2023 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
Company-owned life insurance	\$ 285	\$ —	\$ 285	\$ —
Total	<u>\$ 285</u>	<u>\$ —</u>	<u>\$ 285</u>	<u>\$ —</u>
Assets	Total Fair Value	Fair Value Measurements as of December 31, 2022 Using Fair Value Hierarchy		
		Level 1	Level 2	Level 3
Company-owned life insurance	\$ 2,114	\$ —	\$ 2,114	\$ —
Total	<u>\$ 2,114</u>	<u>\$ —</u>	<u>\$ 2,114</u>	<u>\$ —</u>

Note 17 – Hedging Activities

The Company's ongoing business operations expose it to various risks, including fluctuating foreign exchange rates and interest rate risk. To manage these risks, the Company periodically enters into derivative financial instruments, such as foreign exchange forward contracts and interest rate swap agreements. The Company does not hold or enter into financial instruments for trading or speculative purposes.

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

Foreign Exchange Forward Contracts

A significant portion of the Company's revenues and earnings are generated by its foreign operations. These foreign operations also represent a significant portion of the Company's assets and liabilities. Generally, all of these foreign operations use the local currency as their functional currency and many have operations in currencies other than their functional currency, which creates foreign exchange risk. The Company uses foreign exchange forward contracts to economically hedge the impact of the variability in exchange rates on certain assets and/or liabilities denominated in certain foreign currencies. These forward contracts are marked-to-market at each reporting date. Changes in the fair value of the underlying instrument and settlements are recognized in earnings in Other (expense) income, net. The fair value of the forward contract is determined from sources independent of the Company, including the financial institutions which are party to the derivative instruments.

All open foreign exchange forward contracts as of September 30, 2023 were entered into as hedges against the U.S. dollar. As of September 30, 2023, the Company had open foreign exchange forward contracts with a notional U.S. dollar value of the following:

Currency	September 30, 2023
Mexican Peso	\$ 41,900
Japanese Yen	4,500
	<u>\$ 46,400</u>

Open foreign exchange forward contracts as of September 30, 2023 had maturities occurring over a period of one month.

Interest Rate Swaps

In order to manage the Company's exposure to variable interest rate risk associated with the Credit Facility, such as the Secured Overnight Financing Rate ("SOFR"), in the first quarter of 2023, the Company entered into \$300.0 million notional amounts of three year interest rate swaps to convert a portion of the Company's variable rate borrowings into a fixed rate obligation. See Note 14 of Notes to Condensed Consolidated Financial Statements.

These interest rate swaps are designated as cash flow hedges and, as such, the contracts are marked-to-market at each reporting date and any unrealized gains or losses are included in AOCI to the extent effective and reclassified to interest expense in the period during which the transaction affects earnings or it becomes probable that the forecasted transaction will not occur. Interest rate swaps are entered into with a limited number of counterparties within several tranches, each of which allows for net settlement of all contracts through a single payment to participating counterparties in a single currency in the event of a default on or termination of any one contract. As such, in accordance with the Company's accounting policy, these derivative instruments are recorded on a net basis within the Condensed Consolidated Balance Sheets.

The balance sheet classification and fair values of the Company's derivative instruments, which are Level 2 measurements, are as follows:

	Condensed Consolidated Balance Sheet Location	Fair Value	
		September 30, 2023	December 31, 2022
Derivatives designated as cash flow hedges:			
Interest rate swaps	Other non-current Assets	\$ 7,538	\$ —
Foreign currency forward contracts	Other current liabilities	(564)	\$ —
		<u>\$ 6,974</u>	<u>\$ —</u>

The following table presents the net unrealized (gain) loss deferred to AOCI:

		September 30, 2023	December 31, 2022
Derivatives designated as cash flow hedges:			
Interest rate swaps	AOCI	\$ 5,804	\$ —

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

The following table presents the net gain (loss) reclassified from AOCI to earnings:

		Location and Amount of Gain (Loss) Recognized in Statements of Operations			
		Three Months Ended September 30,		Nine Months Ended September 30,	
		2023	2022	2023	2022
Interest rate swaps	Interest expense, net	\$ 1,198	\$ 134	\$ 2,259	\$ (882)
Foreign exchange forward contracts	Other (expense) income, net	(29)	—	2,107	—
		<u>\$ 1,169</u>	<u>\$ 134</u>	<u>\$ 4,366</u>	<u>\$ (882)</u>

Note 18 – Commitments and Contingencies

The Company previously disclosed in its 2022 Form 10-K that two of the Company's locations suffered property damage as a result of flooding and electrical fire, respectively. The Company maintains property and flood insurance for all of its locations globally. During the three and nine months ended September 30, 2023, there have been no significant changes to the facts or circumstances of this previously disclosed matter, other than ongoing work with the Company's insurance adjuster and insurance carrier regarding the insurance claims submitted. Through September 30, 2023, the Company has received cumulative payments from its insurers of \$5.9 million associated with these events. During the nine months ended September 30, 2023, the Company recognized a gain on insurance recoveries of \$1.0 million. See Note 10 of Notes to the Condensed Consolidated Financial Statements.

As previously disclosed in its 2022 Form 10-K, the Company is party to certain environmental matters and other litigation. See Note 26 of Notes to Consolidated Financial Statements in the Company's 2022 Form 10-K. During the three and nine months ended September 30, 2023, there have been no significant changes to the facts or circumstances of any of the previously disclosed matters. In addition, during the three and nine months ended September 30, 2023, there are no new environmental matters or litigation that the Company believes will have a material adverse effect on the Company's results of operations, cash flows, or financial condition. Although there can be no assurance regarding the outcome of any of the ongoing environmental matters or litigation the Company is party to, the Company believes that it has made adequate accruals for costs and liabilities associated with environmental matters or provisions for ongoing litigation for which it is aware. The Company has accrued approximately \$6 million as of both September 30, 2023 and December 31, 2022, respectively, for these ongoing matters.

Quaker Chemical Corporation
Management's Discussion and Analysis

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

As used in this Report, the terms "Quaker Houghton," the "Company," "we" and "our" refer to Quaker Chemical Corporation (doing business as Quaker Houghton), its subsidiaries, and associated companies, unless the context otherwise requires. The term the "Combination" refers to the legacy Quaker combination with Houghton International, Inc. ("Houghton") on August 1, 2019.

Executive Summary

Quaker Houghton is the global leader in industrial process fluids. With a presence around the world, including operations in over 25 countries, our customers include thousands of the world's most advanced and specialized steel, aluminum, automotive, aerospace, offshore, container, mining, and metalworking companies. Our high-performing, innovative and sustainable solutions are backed by best-in-class technology, deep process knowledge, and customized services. Quaker Houghton is headquartered in Conshohocken, Pennsylvania, located near Philadelphia in the U.S.

Despite a continued challenging economic environment, the Company delivered strong results in the third quarter of 2023. Net sales in the third quarter of 2023 were \$490.6 million, a decrease of less than 1% compared to \$492.2 million in the third quarter of 2022. This was primarily driven by an increase in selling price and product mix of approximately 2% and a favorable impact of foreign currency translation of 2%, offset by a 4% decrease in sales volumes. The increase in selling price and product mix was primarily the result of value-based pricing initiatives implemented, primarily in 2022, to offset ongoing inflationary pressures. The decline in sales volumes was primarily attributable to soft end market conditions, primarily in the Americas and EMEA segments, partially offset by new business wins.

The Company generated net income in the third quarter of 2023 of \$33.7 million, or \$1.87 per diluted share, compared to net income of \$25.9 million, or \$1.44 per diluted share in the third quarter of 2022. Excluding non-recurring and non-core items in each period, the Company's third quarter of 2023 non-GAAP earnings per diluted share were \$2.05 compared to \$1.74 in the prior year quarter and the Company's current quarter adjusted EBITDA was \$84.4 million compared to \$70.3 million in the third quarter of 2022. These current quarter earnings were primarily driven by a recovery in gross margins compared to the prior year quarter, partially offset by higher selling, general and administrative expenses ("SG&A") as a result of year-over-year inflationary pressures and higher labor-related costs. 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.

During the first quarter of 2023, the Company reorganized its executive management team to align with its new business structure. The Company's new structure includes three reportable segments: (i) Americas; (ii) Europe, Middle East and Africa ("EMEA"); and (iii) Asia/Pacific. The Company's third quarter of 2023 operating performance in each of its three reportable segments reflect similar drivers to that of its consolidated performance. Operating earnings for all segments increased compared to the prior year quarter, driven by an improvement in margins in all three segments. Additional details of each segment's operating performance are further discussed in the Company's Reportable Segments Review, in the Operations section of this Item, below.

Net cash flows provided by operating activities were \$199.5 million in the first nine months of 2023 compared to net cash flows used in operating activities of \$26.3 million in the first nine months of 2022. The net operating cash inflow year-over-year reflects higher operating performance in 2023 compared to 2022 as well as a favorable shift from a working capital investment in the prior year to positive cash flows from working capital in the first nine months of 2023. The key drivers of the Company's operating cash flow and working capital are further discussed in the Company's Liquidity and Capital Resources section of this Item, below.

Overall, the Company delivered strong results in the third quarter of 2023 including relatively stable net sales and an improvement in gross margins. These factors contributed to the Company's current quarter earnings growth despite ongoing inflationary pressures, macroeconomic and geopolitical challenges, soft end market conditions and other factors that have impacted the Company's customers and end markets. Looking at the remainder of 2023, the Company remains focused on executing on items within its control as it manages through a continued uneven and uncertain macroeconomic, geopolitical and end market environment, as well as the potential impact of the automotive industry labor dispute in the Americas segment. The Company is encouraged by its continued execution on its financial and operational priorities and the positive momentum built through the first nine months of 2023 and continues to expect to deliver higher earnings and cash flow in 2023 as compared to 2022.

Critical Accounting Policies and Estimates

Our significant accounting policies are described in "Management's Discussion and Analysis" and "Note 1 – Significant Accounting Policies" to the Consolidated Financial Statements in our 2022 Form 10-K. There have been no material changes to the critical accounting policies and estimates previously disclosed in its 2022 Form 10-K remain materially consistent.

Recently Issued Accounting Standards

See Note 3 of Notes to Condensed Consolidated Financial Statements, in Part I, Item 1, of this Report for a discussion regarding recently issued accounting standards.

Quaker Chemical Corporation
Management's Discussion and Analysis

Liquidity and Capital Resources

As of September 30, 2023, we had cash and cash equivalents of \$198.4 million. Total cash and cash equivalents was \$181.0 million as of December 31, 2022. The \$17.4 million increase in cash and cash equivalents was the net result of \$199.5 million of cash provided by operating activities partially offset by \$150.5 million of cash used in financing activities, \$25.8 million of cash used in investing activities and an unfavorable impact due to the effect of foreign currency translation of approximately \$5.8 million.

Net cash flows provided by operating activities were \$199.5 million in the first nine months of 2023 compared to net cash flows used in operating activities of \$26.3 million in the first nine months of 2022. The increase in net operating cash flow year-over-year reflects higher year-over-year operating performance as well as a cash inflow from working capital, notably reductions in accounts receivable and inventory, in the current year, demonstrating the Company's ongoing focus on cash conversion. Comparatively, during the first nine months of 2022, operating cash flow was negatively impacted by a significant working capital investment due to inflationary impacts on inventory and related pricing impacts on accounts receivable.

Net cash flows used in investing activities were \$25.8 million in the first nine months of 2023 compared to \$29.6 million in the first nine months of 2022. The lower level of cash used in investing activities year-over-year is the result of lower payments in the current year related to acquisitions which the Company had in the prior year, partially offset by higher capital expenditures in the current year. See Note 2 of Notes to Condensed Consolidated Financial Statements in Item 1 of this Report.

Net cash flows used in financing activities were \$150.5 million in the first nine months of 2023 compared to net cash flows provided by financing activities of \$46.6 million in the first nine months of 2022. The increase in net cash outflows was primarily related to net repayments of borrowings in the first nine months of 2023, primarily under the Company's Credit Facility, described further below, as compared to net borrowings in the first nine months of 2022, which included the impact of new borrowings, net of repayments of old borrowings and debt issuance costs, related to the June 2022 credit facility amendment, described further below. In addition, the Company paid \$23.5 million of cash dividends during the first nine months of 2023, a \$1.2 million, or 5% increase, in cash dividends compared to the prior year quarter.

During June 2022, the Company, and its wholly owned subsidiary, Quaker Houghton B.V., as borrowers, Bank of America, N.A., as administrative agent, U.S. dollar swing line lender and letter of credit issuer, Bank of America Europe Designated Active Company, as Euro Swing Line Lender, certain guarantors and other lenders entered into an amendment to its primary credit facility. The amended credit facility (the "Credit Facility") established (A) a \$150.0 million Euro equivalent senior secured term loan (the "Euro Term Loan"), (B) a \$600.0 million senior secured term loan (the "U.S. Term Loan"), and (C) a \$500.0 million senior secured revolving credit facility (the "Revolver"), each maturing in June 2027. The Company has the right to increase the amount of the Credit Facility by an aggregate amount not to exceed the greater of \$300.0 million or 100% of Consolidated EBITDA, subject to certain conditions including the agreement to provide financing by any lender providing such increase.

As of September 30, 2023, the Company had Credit Facility borrowings outstanding of \$814.8 million. As of December 31, 2022, the Company had Credit Facility borrowings outstanding of \$943.5 million. The Company's other debt obligations are primarily industrial development bonds, bank lines of credit and municipality-related loans, which totaled \$11.1 million as of September 30, 2023 and \$11.3 million as of December 31, 2022. Total unused capacity under these arrangements as of September 30, 2023 was approximately \$34 million. The Company's total net debt as of September 30, 2023, which consists of total borrowings of \$825.9 million less cash and cash equivalents of \$198.4 million, was \$627.5 million. The Credit Facility contains affirmative and negative covenants, financial covenants and events of default. Financial covenants contained in the Credit Facility include a consolidated interest coverage ratio test and a consolidated net leverage ratio test. As of September 30, 2023, the Company was in compliance with all of the Credit Facility covenants. Refer to the description of the Company's primary Credit Facility in Note 20 of Notes to Consolidated Financial Statements in its 2022 Form 10-K and in Note 14 of Notes to Condensed Consolidated Financial Statements in Item 1 of this Report for more information about the covenants and events of default.

The weighted average variable interest rate incurred on the outstanding borrowings under the Credit Facility during the three and nine months ended September 30, 2023 was approximately 6.4% and 6.1%, respectively. As of September 30, 2023, the interest rate on the outstanding borrowings under the Credit Facility was approximately 6.3%. As part of the Credit Facility, in addition to paying interest on the outstanding principal, the Company is also required to pay an annual commitment fee ranging from 0.150% to 0.275% related to unutilized commitments under the Revolver, depending on the Company's consolidated net leverage ratio. The Company had unused capacity under the Revolver of approximately \$414 million, which is net of bank letters of credit of approximately \$3 million, as of September 30, 2023.

Quaker Chemical Corporation Management's Discussion and Analysis

In order to manage the Company's exposure to variable interest rate risk associated with the Credit Facility, such as SOFR, in the first quarter of 2023, the Company entered into \$300.0 million notional amounts of three-year interest rate swaps to convert a portion of the Company's variable rate borrowings into an average fixed rate obligation of 3.64% plus an applicable margin as provided in the Credit Facility based on the Company's consolidated net leverage ratio. As of September 30, 2023, the aggregate interest rate on the swaps, including the fixed base rate plus the applicable margin, was 5.3%. See Note 17 of Notes to Condensed Consolidated Financial Statements.

In connection with executing the original credit facility in 2019 and the amended Credit Facility during the second quarter of 2022, the Company capitalized certain third-party and creditor debt issuance costs. Costs attributed to the Euro Term Loan and U.S. Term Loan were recorded as a direct offset of Long-term debt on the Condensed Consolidated Balance Sheet. Costs attributed to the Revolver were recorded within Other assets on the Condensed Consolidated Balance Sheet. These capitalized costs will collectively be amortized into Interest expense over the five-year term of the Credit Facility. As of September 30, 2023, the Company had \$1.7 million of debt issuance costs recorded as an offset of Long-term debt on the Condensed Consolidated Balance Sheet and \$3.6 million of debt issuance costs recorded within Other assets on the Condensed Consolidated Balance Sheet. Comparatively, as of December 31, 2022, the Company had \$2.0 million of debt issuance costs recorded as an offset of Long-term debt on the Condensed Consolidated Balance Sheet and \$4.3 million of debt issuance costs recorded within Other assets on the Condensed Consolidated Balance Sheet.

The Company uses foreign exchange forward contracts to economically hedge the impact of the variability in exchange rates on certain assets and/or liabilities denominated in certain foreign currencies. During the first nine months ended 2023, the Company entered into and settled forward contracts resulting in cash proceeds of \$2.1 million. See Note 17 of Notes to Condensed Consolidated Financial Statements.

In the first nine months of 2022, the Company incurred \$8.0 million of total Combination, integration and other acquisition-related expenses, described in the Non-GAAP Measures section of this Item below. The Company had net cash outflows related to the Combination, integration and other acquisition-related expenses during the first nine months of 2022 of \$4.3 million. The Company had no Combination, integration and other acquisition-related expenses in the first nine months of 2023, except for \$0.5 million in other income related to changes for an indemnification asset related to the Combination.

During the first nine months of 2023, the Company incurred \$3.8 million of strategic planning expenses as compared to \$4.5 million during the first nine months of 2022. The Company expects to incur additional operating costs and associated cash flows, as well as higher capital expenditures related to strategic planning, process optimization and the next phase of the Company's long-term integration to further optimize its footprint, processes and other functions in 2023 and thereafter.

The Company's management approved, and the Company initiated, a global restructuring plan (the "QH Program") in 2019 as part of its planned cost synergies associated with the Combination. As of December 31, 2022, the Company had substantially completed all of the initiatives under the QH Program with only an immaterial amount of remaining severance still to be paid, which has been paid as of September 30, 2023. In the fourth quarter of 2022, the Company's management initiated a global cost and optimization program to improve its cost structure and drive a more profitable and productive organization. The exact timing to complete all actions and final costs associated will depend on a number of factors and are subject to change. The Company is continuing to evaluate and expects to implement further actions under this program, and as a result, additional headcount reductions and restructuring costs may be incurred in the future. The Company expects to generate full run-rate cost savings from the global cost and optimization program of approximately \$20 million by the end of 2024. The Company expects total cash costs of this program to be approximately 1 to 1.5 times savings. The Company recognized Restructuring and related charges of \$6.0 million and \$0.6 million for the nine months ended September 30, 2023, and 2022, respectively, as a result of these programs. The Company made cash payments related to the settlement of restructuring liabilities under the restructuring programs during the first nine months of 2023 of approximately \$7.9 million compared to \$0.4 million in the first nine months of 2022. The Company has remaining restructuring accruals, as of September 30, 2023, for this program of \$3.6 million, which the Company expects to settle over the next twelve months. See Note 7 of Notes to Condensed Consolidated Financial Statements in Item 1 of this Report.

As of September 30, 2023, the Company's gross liability for uncertain tax positions, including interest and penalties, was \$20.4 million. The Company cannot determine a reliable estimate of the timing of cash flows by period related to its uncertain tax position liability. However, should the entire liability be paid, the amount of the payment may be reduced by up to \$6.5 million as a result of offsetting benefits in other tax jurisdictions.

Quaker Chemical Corporation Management's Discussion and Analysis

The Company previously disclosed in its 2022 Form 10-K that two of the Company's locations suffered property damage as a result of flooding and electrical fire, respectively. The Company maintains property and flood insurance for all of its locations globally. During the three and nine months ended September 30, 2023, there have been no significant changes to the facts or circumstances of this previously disclosed matter, other than ongoing work with the Company's insurance adjuster and insurance carrier regarding the insurance claims submitted. Through September 30, 2023, the Company has received cumulative payments from its insurers of \$5.9 million associated with these events. During the nine months ended September 30, 2023, the Company recognized a gain on insurance recoveries of \$1.0 million. See Notes 10 and 18 of Notes to the Condensed Consolidated Financial Statements, in Item 1 of this report.

The Company believes that its existing cash, anticipated cash flows from operations and available liquidity will be sufficient to support its operating requirements and fund its business objectives for at least the next twelve months, including but not limited to, payments of dividends to shareholders, capital expenditures, other growth opportunities (including potential acquisitions), pension plan contributions, implementing actions to achieve the Company's sustainability goals and other potential known or anticipated contingencies. The Company also believes it has sufficient additional liquidity to support its operating requirements and to fund its business obligations for the period beyond the next twelve months, including the aforementioned items which are expected to recur annually, as well as future principal and interest payments on the Company's Credit Facility, tax obligations and other long-term liabilities. The Company's liquidity is affected by many factors, some based on normal operations of our business and others related to the impact of the pandemic and other global events on our business and on global economic conditions as well as industry uncertainties, which we cannot predict. We also cannot predict economic conditions and industry downturns or the timing, strength or duration of recoveries. We may seek, as we believe appropriate, additional debt or equity financing that would provide capital for corporate purposes, working capital funding, additional liquidity needs or to fund future growth opportunities, including possible acquisitions and organic investments. The timing and amount of potential capital requirements cannot be determined at this time and will depend on a number of factors, including the actual and projected demand for our products, specialty chemical industry conditions, competitive factors, and the condition of financial markets, among others.

Non-GAAP Measures

The information in this Form 10-Q includes non-GAAP (unaudited) financial information that includes EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP operating income, non-GAAP operating margin, non-GAAP net income and non-GAAP earnings per diluted share. 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 indicative of future operating performance of the Company, and facilitate a comparison among fiscal periods, as the non-GAAP financial measures exclude items that are not considered indicative of future operating performance or 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. In addition, our definitions of EBITDA, adjusted EBITDA, adjusted EBITDA margin, non-GAAP operating income, non-GAAP operating margin, non-GAAP net income and non-GAAP earnings per diluted share, as discussed and reconciled below to the most comparable respective GAAP measures, may not be comparable to similarly named measures reported by other companies.

The Company presents EBITDA, which is calculated as net income attributable to the Company before depreciation and amortization, interest expense, net, and taxes on income before equity in net income of associated companies. The Company also presents adjusted EBITDA, which is calculated as EBITDA plus or minus certain items that are not considered indicative of future operating performance or not considered core to the Company's operations. In addition, the Company presents non-GAAP operating income, which is calculated as operating income plus or minus certain items that are not considered indicative of future operating performance or not considered core to the Company's operations. Adjusted EBITDA margin and non-GAAP operating margin are calculated as the percentage of adjusted EBITDA and non-GAAP operating income to consolidated net sales, respectively. The Company believes these non-GAAP measures provide transparent and useful information and are widely used by investors, analysts, and peers in our industry as well as by management in assessing the operating performance of the Company on a consistent basis.

Additionally, the Company presents non-GAAP net income and non-GAAP earnings per diluted share as additional performance measures. Non-GAAP net income is calculated as adjusted EBITDA, defined above, less depreciation and amortization, interest expense, net, and taxes on income before equity in net income of associated companies, in each case adjusted, as applicable, for any depreciation, amortization, interest or tax impacts resulting from the non-core items identified in the reconciliation of net income attributable to the Company to adjusted EBITDA. Non-GAAP earnings per diluted share is calculated as non-GAAP net income per diluted share as accounted for under the "two-class share method." The Company believes that non-GAAP net income and non-GAAP earnings per diluted share provide transparent and useful information and are widely used by investors, analysts, and peers in our industry as well as by management in assessing the operating performance of the Company on a consistent basis.

Quaker Chemical Corporation
Management's Discussion and Analysis

Certain of the prior period non-GAAP financial measures presented in the following tables have been adjusted to conform with current period presentation. The following tables reconcile the Company's non-GAAP financial measures (unaudited) to their most directly comparable GAAP (unaudited) financial measures (dollars in thousands unless otherwise noted, except per share amounts):

Non-GAAP Operating Income and Margin Reconciliations	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Operating income	\$ 59,518	\$ 44,609	\$ 166,242	\$ 105,915
Combination, integration and other acquisition-related expenses (a)	—	2,107	—	7,992
Restructuring and related charges (credits), net (b)	1,019	(1,423)	6,034	(609)
Strategic planning expenses (c)	1,093	4,545	3,759	10,745
Russia-Ukraine conflict related expenses (d)	—	88	—	2,183
Other charges (e)	206	1,016	855	2,681
Non-GAAP operating income	\$ 61,836	\$ 50,942	\$ 176,890	\$ 128,907
Non-GAAP operating margin (%) (l)	12.6 %	10.3 %	11.9 %	8.8 %
EBITDA, Adjusted EBITDA, Adjusted EBITDA Margin and Non-GAAP Net Income Reconciliations	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
Net income attributable to Quaker Chemical Corporation	\$ 33,670	\$ 25,867	\$ 92,550	\$ 60,026
Depreciation and amortization (j)	20,866	19,908	62,210	61,491
Interest expense, net	12,781	8,389	38,744	20,228
Taxes on income before equity in net income of associated companies (k)	13,593	10,185	36,956	14,425
EBITDA	80,910	64,349	230,460	156,170
Equity (income) loss in a captive insurance company (f)	(756)	174	(748)	2,199
Combination, integration and other acquisition-related expenses (credits) (a)	—	2,107	(475)	10,387
Restructuring and related charges (credits), net (b)	1,019	(1,423)	6,034	(609)
Strategic planning expenses (c)	1,093	4,545	3,759	10,745
Russia-Ukraine conflict related expenses (d)	—	88	—	2,183
Currency conversion impacts of hyper-inflationary economies (g)	1,229	991	2,869	1,216
Loss on extinguishment of debt (i)	—	—	—	6,763
Other charges (credits) (e)	886	(540)	1,515	172
Adjusted EBITDA	\$ 84,381	\$ 70,291	\$ 243,414	\$ 189,226
Adjusted EBITDA margin (%) (l)	17.2 %	14.3 %	16.4 %	13.0 %
Adjusted EBITDA	\$ 84,381	\$ 70,291	\$ 243,414	\$ 189,226
Less: Depreciation and amortization (j)	20,866	19,908	62,210	61,491
Less: Interest expense, net	12,781	8,389	38,744	20,228
Less: Taxes on income before equity in net income of associated companies - adjusted (a)(k)	13,806	10,821	36,766	27,189
Non-GAAP net income	\$ 36,928	\$ 31,173	\$ 105,694	\$ 80,318

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Non-GAAP Earnings per Diluted Share Reconciliations	Three Months Ended September 30,		Nine Months Ended September 30,	
	2023	2022	2023	2022
	\$	\$	\$	\$
GAAP earnings per diluted share attributable to Quaker Chemical Corporation common shareholders	1.87	1.44	5.14	3.35
Equity (income) loss in a captive insurance company per diluted share (f)	(0.04)	0.01	(0.04)	0.12
Combination, integration and other acquisition-related expenses (credits) per diluted share (a)	—	0.09	(0.03)	0.47
Restructuring and related charges (credits), net per diluted share (b)	0.04	(0.05)	0.25	(0.02)
Strategic planning expenses per diluted share (c)	0.04	0.19	0.17	0.46
Russia-Ukraine conflict related expenses per diluted share (d)	—	0.01	—	0.11
Currency conversion impacts of hyper-inflationary economies per diluted share (g)	0.07	0.06	0.16	0.07
Loss on extinguishment of debt per diluted share (i)	—	—	—	0.29
Other charges (credits) per diluted share (e)	0.04	(0.03)	0.06	—
Impact of certain discrete tax items per diluted share (h)	0.03	0.02	0.16	(0.37)
Non-GAAP earnings per diluted share (m)	\$ 2.05	\$ 1.74	\$ 5.87	\$ 4.48

- (a) Combination, integration and other acquisition-related expenses (credits) in 2022 included certain legal, financial, and other advisory and consultant costs incurred in connection with the Combination integration activities and similar expenses associated with the Company's other recent acquisitions. These costs are not indicative of the future operating performance of the Company. Approximately \$0.3 million and \$0.5 million for the three and nine months ended September 30, 2022 of these pre-tax costs were considered non-deductible for the purpose of determining the Company's effective tax rate, and, therefore, taxes on income before equity in net income of associated companies - adjusted reflects the impact of these items. During the nine months ended September 30, 2023, the Company recorded \$0.5 million of other income due to changes in an indemnification asset related to the Combination. Similarly, during the nine months ended September 30, 2022, the Company recorded \$2.4 million, respectively, of other expense due to changes in a Combination-related indemnification asset. The amounts recorded that are related to the changes in indemnification assets are included in the caption "Combination, integration and other acquisition-related (credits) expenses" in the reconciliation of GAAP earnings per diluted share attributed to Quaker Chemical Corporation common shareholders to Non-GAAP earnings per diluted share as well as the reconciliation of net income attributable to Quaker Chemical Corporation to Adjusted EBITDA and Non-GAAP net income. See Notes 2, 10, and 11 of Notes to Condensed Consolidated Financial Statements, which appear in Item 1 of this Report.
- (b) Restructuring and related charges (credits), net represent the costs (credits) incurred by the Company associated with the Company's restructuring programs. These costs (credits) are not indicative of the future operating performance of the Company. See Note 7 of Notes to Condensed Consolidated Financial Statements, which appear in Item 1 of this Report.
- (c) Strategic planning expenses include certain consultant and advisory expenses for the Company's strategic planning phase of its long-term process optimization and integration projects to further optimize its footprint, processes and other functions. These planning phase costs are one-time in nature and not indicative of the future operating performance of the Company.
- (d) Russia-Ukraine conflict related expenses represent the direct costs associated with the Company's exit of operations in Russia during 2022, including costs for employee separation benefits, as well as costs associated with establishing specific reserves or changes to existing reserves for trade accounts receivable within the Company's EMEA reportable segment for certain customers who filed for bankruptcy protection and were directly impacted by the conflict between Russia and Ukraine. These expenses are not indicative of the future operating performance of the Company.
- (e) Other charges (credits) include executive transition costs, facility remediation insurance recoveries, net, charges incurred by an inactive subsidiary of the Company as a result of the termination of restrictions on insurance settlement reserves and non-service components of the Company's pension and postretirement net periodic benefit income and expense. See Notes 9 and 18 of Notes to Condensed Consolidated Financial Statements, which appear in Item 1 of this Report.

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- (f) Equity (income) loss in a captive insurance company represents the after-tax income attributable to the Company's interest in Primex, Ltd. ("Primex"), a captive insurance company. The Company holds a 32% investment in and has significant influence over Primex, and therefore accounts for this interest under the equity method of accounting. The (income) loss attributable to Primex is not indicative of the future operating performance of the Company and is not considered core to the Company's operations.
- (g) Currency conversion impacts of hyper-inflationary economies represents the foreign currency remeasurement impacts associated with the Company's affiliates whose local economies are designated as hyper-inflationary under U.S. GAAP. During both the three and nine months ended September 30, 2023 and 2022, the Company incurred non-deductible, pre-tax charges related to the Company's Argentina and Türkiye affiliates. The charges incurred related to the immediate recognition of foreign currency remeasurement in the Consolidated Statements of Income associated with these entities are not indicative of the future operating performance of the Company. See Note 1 of Notes to Condensed Consolidated Financial Statements, which appears in Item 1 of this Report.
- (h) The impacts of certain discrete tax items include changes in valuation allowances recorded on certain Brazilian branch foreign tax credits and the related deferred taxes. These discrete items relate to tax law changes occurring in 2022 and 2023, both in the United States and Brazil which impacted the creditability of Brazilian foreign taxes in the U.S. Additionally, the Company has discrete items related to the remeasurement of deferred taxes on the transfer of intellectual property and the release of the reserves for uncertain tax positions. See Note 11 of Notes to Condensed Consolidated Financial Statements, which appears in Item 1 of this Report.
- (i) In connection with executing the Amended Credit Facility, the Company recorded a loss on extinguishment of debt of approximately \$6.8 million during the period ended September 30, 2022 which includes the write-off of certain previously unamortized deferred financing costs as well as a portion of the third-party and creditor debt issuance costs incurred to execute the Amended Credit Facility. These expenses are not indicative of the future operating performance of the Company. See Note 14 of Notes to Condensed Consolidated Financial Statements, which appears in Item 1 of this Report.
- (j) Depreciation and amortization for both the three and nine months ended September 30, 2023 and September 30, 2022 includes approximately \$0.3 million and \$0.8 million, respectively, of amortization expense recorded within equity in net income of associated companies in the Company's Condensed Consolidated Statements of Operations, which is attributable to the amortization of the fair value step up for the Company's 50% interest in a joint venture in Korea as a result of required purchase accounting.
- (k) Taxes on income before equity in net income of associated companies – adjusted presents the impact of any current and deferred income tax expense (benefit), as applicable, of the reconciling items presented in the reconciliation of net income attributable to Quaker Chemical Corporation to adjusted EBITDA and was determined utilizing the applicable rates in the taxing jurisdictions in which these adjustments occurred, subject to deductibility. Combination, integration and other acquisition-related expenses (credits) described in (a) resulted in an incremental tax expense of \$0.5 million and \$1.9 million for the three and nine months ended September 30, 2022, respectively. Restructuring and related charges (credits), net described in (b) above resulted in incremental taxes of \$0.2 million and \$1.5 million for the three and nine months ended September 30, 2023, respectively, compared to an incremental benefit of \$0.3 million and \$0.1 million for the three and nine months ended September 30, 2022, respectively. Strategic planning expenses described in (c) above resulted in incremental taxes of \$0.3 million and \$0.9 million for the three and nine months ended September 30, 2023, respectively, compared to incremental taxes of \$1.0 million and \$2.5 million for the three and nine months ended September 30, 2022, respectively. Russia-Ukraine conflict related expenses described in (d) resulted in incremental taxes of less than \$0.1 million and \$0.5 million for the three and nine months ended September 30, 2022, respectively. Other charges described in (e) resulted in incremental taxes of \$0.2 million and \$0.4 million for the three and nine months ended September 30, 2023, compared to incremental taxes of \$0.1 million and a tax benefit of \$0.1 million for the three and nine months ended September 30, 2022, respectively. The impact of certain discrete items described in (h) resulted in a tax benefit of \$0.5 million and \$2.9 million for the three and nine months ended September 30, 2023, respectively, compared to a tax benefit of \$0.5 million and incremental taxes of \$6.4 million for the three and nine months ended September 30, 2022, respectively. Loss on extinguishment of debt described in (i) resulted in incremental taxes of \$1.6 million during the nine months ended September 30, 2022.
- (l) The Company calculates adjusted EBITDA margin and non-GAAP operating margin as the percentage of adjusted EBITDA and non-GAAP operating income to consolidated net sales.
- (m) The Company calculates non-GAAP earnings per diluted share as non-GAAP net income attributable to the Company per weighted average diluted shares outstanding using the "two-class share method" to calculate such in each given period.

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Off-Balance Sheet Arrangements

The Company had no material off-balance sheet commitments or obligations as of September 30, 2023. The Company's off-balance sheet items outstanding as of September 30, 2023 includes approximately \$5 million of total bank letters of credit and guarantees. The bank letters of credit and guarantees are not significant to the Company's liquidity or capital resources. See Note 14 of Notes to Condensed Consolidated Financial Statements in Item 1 of this Report.

Operations**Consolidated Operations Review – Comparison of the Third Quarter of 2023 with the Third Quarter of 2022**

Net sales were \$490.6 million in the third quarter of 2023 compared to \$492.2 million in the third quarter of 2022. The net sales decrease of \$1.6 million, or less than 1%, quarter-over-quarter reflects an increase in selling price and product mix of approximately 2% and a favorable impact of foreign currency translation of 2%, offset by a decline in sales volumes of approximately 4%. The increase in selling price and product mix was primarily driven by year-over-year impact of our value-based pricing initiatives. The decline in sales volumes was primarily attributable to softer end market conditions across the Company's EMEA and Americas segments and the Company's value-based pricing initiatives, partially offset by an increase in sales volumes in the Asia/Pacific segment and a positive contribution from new business wins in all segments.

COGS were \$307.3 million in the third quarter of 2023 compared to \$331.5 million in the third quarter of 2022, a decrease of \$24.2 million. The decrease in COGS reflects lower spend on the decline in current year sales volumes and to a lesser extent softening in the Company's global raw material costs.

Gross profit was \$183.3 million in the third quarter of 2023 compared to \$160.7 million in the third quarter of 2022, an increase of approximately \$22.6 million or 14%. The Company's reported gross margin in the third quarter of 2023 was 37.4% compared to 32.7% in the third quarter of 2022 primarily driven by the year-over-year impact of our value-based pricing initiatives, primarily implemented in 2022, which offset significant increases in raw material and other input costs.

SG&A was \$122.8 million in the third quarter of 2023 compared to \$115.5 million in the third quarter of 2022, an increase of approximately \$7.3 million or 6%, driven by higher labor-related costs, including year-over-year inflationary increases, and higher levels of incentive compensation due to improved Company performance.

The Company incurred \$2.1 million of Combination, integration and other acquisition-related operating expenses in the third quarter of 2022, primarily due to various professional fees related to legal, financial and other advisory and consultant expenses for Combination integration activities. There were no similar expenses incurred in the third quarter of 2023.

The Company incurred Restructuring and related charges of \$1.0 million and a credit of \$1.4 million during the third quarters of 2023 and 2022, respectively, related to reductions in headcount and site closures under the Company's restructuring programs. See the Non-GAAP Measures section of this Item, above.

Operating income in the third quarter of 2023 was \$59.5 million compared to \$44.6 million in the third quarter of 2022. Excluding non-recurring and non-core expenses that are not indicative of the future operating performance of the Company described in the Non-GAAP Measures section of this Item, above, the Company's non-GAAP operating income increased to \$61.8 million in the third quarter of 2023 as compared to \$50.9 million in the third quarter of 2022 primarily due to higher gross profit partially offset by higher SG&A, as described above.

The Company had Other expense, net of \$2.7 million in the third quarter of 2023 as compared to other income, net of \$0.1 million in the third quarter of 2022. Both the third quarter of 2023 and 2022 included foreign exchange transaction losses, which were higher in the current year. The third quarter of 2022 also included facility remediation recoveries, net of \$1.1 million. The Company had no such facility remediation recoveries during the third quarter of 2023. See the Non-GAAP Measures section of this Item, above.

Interest expense, net, was \$12.8 million in the third quarter of 2023 compared to \$8.4 million in the third quarter of 2022, an increase of \$4.4 million as a result of an increase in interest rates partially offset by a reduction in borrowings outstanding.

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Management's Discussion and Analysis

The Company's effective tax rates for the third quarters of 2023 and 2022 were 30.9% and 28.1%, respectively. The Company's effective tax rate for the third quarter of 2023 was primarily impacted by foreign tax inclusions, withholding taxes, return to provision adjustments, the impact of U.S. Department of Treasury guidance on the usage of foreign tax credits, and the impact of forecasted pre-tax earnings and the mix of such earnings. Comparatively, the effective tax rate for the third quarter of 2022 was largely driven by foreign tax inclusions, a reduction in reserves for uncertain tax positions, withholding taxes, and the impact of forecasted pre-tax earnings and the mix of such earnings. In addition, the effective tax rate for the third quarter of 2022 was impacted by the Company recording earnings of one of its subsidiaries at a statutory tax rate of 25% while the recertification of its concessionary 15% tax rate was pending receipt. Excluding the impact of non-core items in each quarter, described in the Non-GAAP Measures section of this Item, above, the Company estimates that its effective tax rates for the third quarters of 2023 and 2022 would have been approximately 28% and 26%, respectively. The Company expects continued volatility in its effective tax rates due to several factors, including the timing and scope of tax audits and the expiration of applicable statutes of limitations as they relate to uncertain tax positions, the unpredictability of the timing and amount of certain incentives in various tax jurisdictions, the treatment of certain acquisition-related costs and the timing and amount of certain share-based compensation-related tax benefits, among other factors.

Equity in net income of associated companies was \$3.3 million in the third quarter of 2023 compared to a net loss of \$0.2 million in the third quarter of 2022, an increase of \$3.5 million, primarily due to higher current year income from the Company's interest in a captive insurance company as well as from the Company's 50% interest in a joint venture in Korea. See the Non-GAAP Measures section of this Item, above.

Net income attributable to noncontrolling interest was less than \$0.1 million in both the third quarter of 2023 and 2022.

Foreign exchange negatively impacted the Company's third quarter of 2023 results by approximately 1% compared to the third quarter of 2022 driven by the impact from foreign currency translation on earnings as well as higher foreign exchange transaction losses in the current quarter as compared to the prior year third quarter.

Consolidated Operations Review – Comparison of the First Nine Months of 2023 with the First Nine Months of 2022

Net sales were \$1,486.2 million in the first nine months of 2023 compared to \$1,458.8 million in the first nine months of 2022. The net sales increase of \$27.4 million or 2% year-over-year reflects increases in selling price and product mix of approximately 11%, partially offset by a decline in sales volumes of approximately 9%. The increase in selling price and product mix was primarily driven by year-over-year impact of our value-based pricing initiatives. The decline in sales volumes was primarily attributable to softer end market conditions across all regions, the Company's value-based pricing initiatives and customer order patterns, as well as the impacts of the ongoing war in Ukraine in the EMEA segment, and the wind-down of the tolling agreement for products previously divested related to the Combination, partially offset by new business wins, as mentioned above.

COGS were \$951.7 million in the first nine months of 2023 compared to \$1,002.4 million in the first nine months of 2022. The decrease in COGS of \$50.7 million or 5% reflects lower spend on the decline in current year sales volumes, which more than offset higher costs due to inflationary pressures in the Company's global raw material, manufacturing and supply chain and logistics costs compared to the prior year.

Gross profit in the first nine months of 2023 increased \$78.1 million or 17% from the first nine months of 2022. The Company's reported gross margin in the first nine months of 2023 was 36.0% compared to 31.3% in the first nine months of 2022. The Company's current year improvement in gross margin was primarily driven by the year-over-year impact of our value-based pricing initiatives and, to a lesser extent, decreases in raw material and other input costs.

SG&A in the first nine months of 2023 increased \$19.1 million or 6% compared to the first nine months of 2022 driven by higher labor-related costs including year-over-year inflationary increases and higher levels of incentive compensation on improved Company performance, partially offset by lower SG&A due to foreign currency translation compared to the prior year.

The Company incurred \$8.0 million of Combination, integration and other acquisition related operating expenses in the first nine months of 2022, primarily due to various professional fees related to legal, financial and other advisory and consultant expenses for integration activities including internal control remediation. There were no similar costs in the first nine months of 2023. See the Non-GAAP Measures section of this Item, above.

The Company incurred Restructuring and related charges of \$6.0 million and credits of \$0.6 million during the first nine months of 2023 and 2022, respectively, related to reductions in headcount and site closures under the Company's previous and current restructuring programs. See the Non-GAAP Measures section of this Item, above.

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Operating income in the first nine months of 2023 was \$166.2 million compared to \$105.9 million in the first nine months of 2022. Excluding non-recurring and non-core expenses that are not indicative of the future operating performance of the Company described in the Non-GAAP Measures section of this Item, above, the Company's current year non-GAAP operating income increased to \$176.9 million for the first nine months of 2023 compared to \$128.9 million in the prior year's first nine months primarily due to higher gross profit partially offset by higher SG&A, described above.

The Company had Other expense of \$8.6 million in the first nine months of 2023 compared to \$10.5 million in the first nine months of 2022. The first nine months of 2023 and 2022 results include \$1.0 million and \$1.1 million, respectively, of facility remediation recoveries, while the prior year's first nine months of 2022 Other expense also includes a \$6.8 million of loss on extinguishment of debt related to the Company's refinancing the Original Credit Facility. See the Non-GAAP Measures section of this Item, above. Also, there was higher foreign currency transaction losses in 2023 compared to 2022.

Interest expense, net, increased \$18.5 million in the first nine months of 2023 compared to the first nine months of 2022, due to an increase in interest rates in the current year partially offset by lower borrowings outstanding as compared to the prior year.

The Company's effective tax rates for the first nine months of 2023 and 2022 were 31.1% and 19.2%, respectively. The Company's effective tax rate for the nine months ended September 30, 2023 was primarily impacted by changes to the valuation allowance for and the usage of foreign tax credits due to an enacted law change in Brazil and additional guidance from the U.S Department of Treasury, foreign tax inclusions, withholding taxes, share-based compensation, state income taxes, and the impact of forecasted pre-tax earnings and the mix of such earnings. Comparatively, the effective tax rate for the nine months ended September 30, 2022 was impacted by foreign tax inclusions, changes in the valuation allowance for foreign tax credits, the impact of audit settlements, a reduction in reserves for uncertain tax positions, withholding taxes, and the impact of forecasted pre-tax earnings and the mix of such earnings. In addition, the effective tax rate during the nine months ended September 30, 2022 was impacted by the Company recording earnings of one of its subsidiaries at a statutory tax rate of 25% while the recertification of its concessionary 15% tax rate was pending receipt. Excluding the impact of non-core items in each period, described in the Non-GAAP Measures section of this Item, above, the Company estimates that its effective tax rates for the first nine months of 2023 and 2022 would have been approximately 28% and 26%, respectively. The Company expects continued volatility in its effective tax rates due to several factors, including the timing and scope of tax audits and the expiration of applicable statutes of limitations as they relate to uncertain tax positions, the unpredictability of the timing and amount of certain incentives in various tax jurisdictions, the treatment of certain acquisition-related costs and the timing and amount of certain share-based compensation-related tax benefits, among other factors.

Equity in net income (loss) of associated companies increased \$11.3 million in the first nine months of 2023 compared to the first nine months of 2022, primarily due to higher current year income from the Company's interest in a captive insurance company (see the Non-GAAP Measures section of this Item, above), as well as higher current year income from the Company's 50% interest in a joint venture in Korea.

Net income attributable to noncontrolling interest was less than \$0.1 million in both the first nine months of 2023 and 2022.

Foreign exchange unfavorably impacted the Company's first nine months of 2023 results by approximately 3% driven by the impact from foreign currency translation on earnings as well as higher foreign exchange transaction losses in the current year as compared to the prior year's first nine months.

Reportable Segments Review - Comparison of the Third Quarter of 2023 with the Third Quarter of 2022

The Company's reportable segments reflect the structure of the Company's internal organization, the method by which the Company's resources are allocated and the manner by which the chief operating decision maker of the Company assesses its performance. During the first quarter of 2023, the Company reorganized its executive management team to align with its new business structure. The Company's new structure includes three reportable segments: (i) Americas; (ii) EMEA; and (iii) Asia/Pacific.

The three segments are comprised of the assets and operations in each respective region, including assets and operations formerly included in the Global Specialty Businesses segment. Prior to the Company's reorganization, the Company's historical reportable segments were: (i) Americas; (ii) EMEA; (iii) Asia/Pacific; and (iv) Global Specialty Businesses. All prior period information has been recast to reflect the Company's new reportable segments.

Segment operating earnings for the Company's reportable segments are comprised of net sales less COGS and SG&A directly related to the respective segment's product sales. Operating expenses not directly attributable to the net sales of each respective segment, such as certain corporate and administrative costs, Combination, integration and other acquisition-related expenses and Restructuring and related charges (credits), net. Other items not specifically identified with the Company's reportable segments include Interest expense, net, and Other (expense) income, net.

Quaker Chemical Corporation Management's Discussion and Analysis

Americas

Americas represented approximately 50% of the Company's consolidated net sales in the third quarter of 2023. The segment's net sales were \$245.9 million, a decrease of \$8.8 million or 3%, compared to the third quarter of 2022. This was driven by a decrease in sales volumes of approximately 8%, partially offset by higher selling price and product mix of approximately 3% and a favorable impact of foreign currency translation of 2%. The current quarter decline in sales volumes compared to the prior year was primarily driven by softer market conditions, customer order patterns and the Company's value-based pricing initiatives, partially offset by new business wins. The increase in selling price and product mix was primarily driven by the year-over-year impact of price increases. The favorable foreign exchange impact was primarily due to the weakening of the U.S. dollar against the Mexican peso as this exchange rate averaged 17.06 Mexican peso per U.S. dollar in the third quarter of 2023 compared to 20.23 Mexican peso per U.S. dollar in the third quarter of 2022. This segment's operating earnings were \$69.1 million, an increase of \$2.4 million or 4%, compared to the third quarter of 2022 primarily driven by an improvement in the segment's operating margins.

EMEA

EMEA represented approximately 29% of the Company's consolidated net sales in the third quarter of 2023. The segment's net sales were \$139.6 million, an increase of \$5.2 million or 4%, compared to the third quarter of 2022. This was driven by higher selling price and product mix of approximately 6% and a favorable impact from foreign currency translation of 7%, partially offset by a decrease in sales volumes of 9%. The increase in selling price and product mix was primarily driven by the year-over-year impact of price increases. The favorable foreign currency translation impact was primarily due to the weakening of the U.S. dollar against the euro as this exchange rate averaged 1.09 U.S. dollars per euro in the third quarter of 2023 compared to 1.01 U.S. dollars per euro in the third quarter of 2022. The decline in sales volumes was primarily driven by softer market conditions, the Company's value-based pricing initiatives, customer order patterns and the impacts of the wind-down of the tolling agreement for products previously divested related to the Combination as well as the ongoing war in Ukraine, partially offset by new business wins. This segment's operating earnings were \$27.9 million, an increase of \$12.4 million or 80%, compared to the third quarter of 2022 primarily driven by an increase in net sales and an improvement in operating margins.

Asia/Pacific

Asia/Pacific represented approximately 21% of the Company's consolidated net sales in the third quarter of 2023. The segment's net sales were \$105.1 million, an increase of \$1.9 million or 2%, compared to the third quarter of 2022. This was driven by higher sales volumes of 6% partially offset by an unfavorable impact from foreign currency translation of 4%. The increase in sales volumes was primarily driven by an increase in end market activity, albeit at lower levels and new business wins, partially offset by the impacts of the Company's value-based pricing initiatives. The increase in selling price and product mix was primarily driven by year-over-year impact of price increases. The unfavorable foreign exchange impact was primarily due to the strengthening of the U.S. dollar against the Chinese renminbi as this exchange rate averaged 7.24 Chinese renminbi per U.S. dollar in the third quarter of 2023 compared to 6.84 Chinese renminbi per U.S. dollar in the third quarter of 2022. This segment's operating earnings were \$31.0 million, an increase of \$4.2 million or 16% compared to the third quarter of 2022 primarily driven by an increase in net sales and an improvement in operating margins as well as slightly lower levels of SG&A.

Reportable Segments Review - Comparison of the First Nine Months of 2023 with the First Nine Months of 2022

Americas

Americas represented approximately 50% of the Company's consolidated net sales in the first nine months of 2023. The segment's net sales were \$750.5 million, an increase of \$48.0 million or 7% compared to the first nine months of 2022. This was driven by higher selling price and product mix of 12% and a favorable impact of foreign currency translation of 1%, partially offset by a decrease in sales volumes of 6%. The increase in selling price and product mix was primarily driven by the year-over-year impact of price increases. The favorable foreign currency impact was primarily due to the weakening of the U.S. dollar against the Mexican peso as this exchange rate averaged 17.78 Mexican peso per U.S. dollar in the first nine months of 2023 compared to 20.25 Mexican peso per U.S. dollar in the first nine months of 2022. The decline in sales volumes compared to the prior year was primarily driven by softer market conditions, the Company's value-based pricing initiatives, customer order patterns, and the wind-down of the tolling agreement for products previously divested related to the Combination, partially offset by new business wins, as mentioned above. This segment's operating earnings were \$204.3 million, an increase of \$40.2 million or 25% compared to the first nine months of 2022 primarily driven by higher net sales coupled with an improvement in operating margins, as mentioned above.

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EMEA

EMEA represented approximately 30% of the Company's consolidated net sales in the first nine months of 2023. The segment's net sales were \$435.6 million, an increase of \$8.9 million or 2% compared to the first nine months of 2022. This was a result of higher selling price and product mix of 13% and a favorable impact of foreign currency translation of approximately 1%, partially offset by a decrease in sales volumes of 12%. The increase in selling price and product mix was primarily driven by the year-over-year impact of price increases. The favorable foreign currency impact was primarily due to the weakening of the U.S. dollar against the euro as this exchange rate averaged 1.08 U.S. dollars per euro in the first nine months of 2023 compared to 1.07 U.S. dollars per euro in the first nine months of 2022. The decline in sales volumes was primarily driven by softer market conditions, the Company's value-based pricing initiatives, customer order patterns, the impacts of the ongoing war in Ukraine and the wind-down of the tolling agreement for products previously divested related to the Combination, partially offset by new business wins. This segment's operating earnings were \$81.1 million, an increase of \$22.3 million or 38% compared to the first nine months of 2022 primarily driven by higher net sales coupled with an improvement in operating margins, as mentioned above.

Asia/Pacific

Asia/Pacific represented approximately 20% of the Company's consolidated net sales in the first nine months of 2023. The segment's net sales were \$300.1 million, a decrease of \$29.4 million or 9% compared to the first nine months of 2022. This was driven by lower sales volumes of 10% and an unfavorable impact of foreign currency translation of 5%, partially offset by higher selling price and product mix of 6%. The decline in sales volumes was primarily driven by softer market conditions, customer order patterns, including the impact of COVID-19 lockdown measures, primarily in China, and the Company's value-based pricing initiatives, partially offset by new business wins. The unfavorable foreign exchange impact was primarily due to the strengthening of the U.S. dollar against the Chinese renminbi as this exchange rate averaged 7.02 Chinese renminbi per U.S. dollar in the first nine months of 2023 compared to 6.59 Chinese renminbi per U.S. dollar in the first nine months of 2022. The increase in selling price and product mix was primarily driven by year-over-year impact of price increases, as mentioned above. This segment's operating earnings were \$86.6 million, an increase of \$10.5 million or 14% compared to the first nine months of 2022. This was primarily driven by a recovery in operating margins as well as slightly lower levels of SG&A, which more than offset the decline in net sales, as mentioned above.

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 us 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, including statements regarding the potential effects of the COVID-19 pandemic, the conflict between Russia and Ukraine, inflation, bank failures, higher interest rate environment, global supply chain constraints on the Company's business, results of operations, and financial condition, our expectation that we will maintain sufficient liquidity, remain in compliance with the terms of the Company's credit facility, expectations about future demand and raw material costs and statements regarding the impact of increased raw material costs and pricing initiatives.

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:

- the impacts on our business as a result of the COVID-19 pandemic;
- the timing and extent of the projected impacts on our business as a result of the Ukrainian and Russian conflict and actions taken by various governments and governmental organizations in response;
- the potential impacts of the automotive industry labor dispute
- inflationary pressures, cost increases and the impacts of constraints and disruptions in the global supply chain;
- the potential benefits of acquisitions;
- the potential for a variety of macroeconomic events, including the possibility of global or regional recessions, inflation generally, continued or accelerated cost increases in prices of raw materials such as oil and increasing interest rates, to impact the value of our assets or result in asset impairments or otherwise adversely affect our business;
- our current and future results and plans including our sustainability goals; and
- statements that include the words "may," "could," "should," "would," "believe," "expect," "anticipate," "estimate," "intend," "plan" or similar expressions.

Quaker Chemical Corporation
Management's Discussion and Analysis

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 the Company'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, in the Company's 2022 Form 10-K 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 the Company's subsequent reports on Forms 10-K, 10-Q, 8-K and other related filings should be consulted. A major risk is that demand for the Company's products and services is largely derived from the demand for our customers' products, which subjects the Company to uncertainties related to downturns in a customer's business and unanticipated customer production slowdowns and shutdowns, including as is currently being experienced by many automotive industry companies as a result of supply chain disruptions and labor disputes.

Other major risks and uncertainties include, but are not limited to, the primary and secondary impacts of the COVID-19 pandemic, as well as inflationary pressures, including the potential for continued significant increases in raw material costs, supply chain disruptions, customer financial instability, rising interest rates and the possibility of economic recession, worldwide economic and political disruptions including the impacts of the military conflicts between Russia and Ukraine and between Israel and Hamas, the economic and other sanctions imposed by other nations on Russia, suspensions of activities in Russia by many multinational companies and the potential expansion of military activity, foreign currency fluctuations, significant changes in applicable tax rates and regulations, future terrorist attacks and other acts of violence, the impact of consolidation in our industry, including loss or consolidation of a major customer and the potential occurrence of cyber-security breaches, cyber-security attacks and other security incidents.

Furthermore, the Company is subject to the same business cycles as those experienced by our customers in the steel, automobile, aircraft, industrial equipment, and durable goods industries. Other factors could also adversely affect us, including those related to acquisitions and the integration of acquired businesses.

Therefore, we caution you not to place undue reliance on our forward-looking statements. For more information regarding these risks and uncertainties as well as certain additional risks that we face, refer to the Risk Factors section, which appears in Item 1A in our 2022 Form 10-K and in our quarterly and other reports filed from time to time with the SEC. This discussion is provided as permitted by the Private Securities Litigation Reform Act of 1995.

Quaker Houghton on the Internet

Financial results, news and other information about Quaker Houghton can be accessed from the Company's website at <https://www.quakerhoughton.com>. This site includes important information on the Company's locations, products and services, financial reports, news releases and career opportunities. The Company's periodic and current reports on Forms 10-K, 10-Q, 8-K, and other filings, including exhibits and supplemental schedules filed therewith, and amendments to those reports, filed with the SEC are available on the Company's website, free of charge, as soon as reasonably practicable after they are electronically filed with or furnished to the SEC. Information contained on, or that may be accessed through, the Company's website is not incorporated by reference in this Report and, accordingly, you should not consider that information part of this Report.

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, 2022, and we believe there has been no material change to that information, except the interest rate risk noted below.

Interest Rate Risk

During June 2022, the Company entered into an amendment to its primary credit facility (the “Original Credit Facility”, or as amended, the “Credit Facility”). See Note 20 of Notes to Consolidated Financial Statements included in Item 8 of our 2022 Form 10-K and Note 14 of Notes to Condensed Consolidated Financial Statements, which appears in Item 1 of this Report. As of December 31, 2022, borrowings under the Credit Facility bear interest at either term Secured Overnight Financing Rate (“SOFR”) or a base rate, in each case, plus an applicable margin based upon the Company’s consolidated net leverage ratio, and, in the case of term SOFR, a spread adjustment equal to 0.10% per annum. As a result of the variable interest rates applicable under the Credit Facility, if interest rates rise significantly, the cost of debt to the Company will increase. This may have an adverse effect on the Company, depending on the extent of the Company’s borrowings outstanding throughout a given year. As of December 31, 2022, and September 30, 2023, the Company had outstanding borrowings under the Credit Facility of approximately \$943.5 million and \$814.8 million, respectively. The weighted average interest rate applicable on outstanding borrowings under the Credit Facility was approximately 4.9% and 6.3% as of December 31, 2022, and September 30, 2023, respectively. The weighted average interest rate applicable on outstanding borrowings under the Original Credit Facility and the Credit Facility during the year ended December 31, 2022 was approximately 3.0% and the nine months ended September 30, 2023 was approximately 6.1%. An interest rate change of 100 basis points would result in an approximate \$9.4 million and \$8.1 million increase or decrease to interest expense for the year ended December 31, 2022 and the year ended December 31, 2023, respectively.

In order to manage the Company’s exposure to variable interest rate risk associated with the Credit Facility, such as SOFR, in the first quarter of 2023, the Company entered into \$300.0 million notional amounts of three year interest rate swaps to convert a portion of the Company’s variable rate borrowings into an average fixed rate obligation of 3.64% plus an applicable margin as provided in the Credit Facility based on the Company’s consolidated net leverage ratio. As of September 30, 2023, the aggregate interest rate on the swaps, including the fixed base rate plus the applicable margin, was 5.3%. These interest rate swaps are designated and qualify as cash flow hedges. The Company has previously used derivative financial instruments primarily for the purpose of hedging exposures to fluctuations in interest rates.

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 defined in Rule 13a-15(e) under the Exchange Act) 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 September 30, 2023, the end of the period covered by this Report, our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act) were effective.

Changes in internal control over financial reporting. As required by Rule 13a-15(d) under the Exchange Act, our management, including our principal executive officer and principal financial officer, has evaluated our internal control over financial reporting to determine whether any changes to our internal control over financial reporting occurred during the quarter ended September 30, 2023 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting. Based on that evaluation, there were no changes that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting during the quarter ended September 30, 2023.

PART II.
OTHER INFORMATION

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

Item 1. Legal Proceedings.

Incorporated by reference is the information in Note 18 of Notes to the Condensed Consolidated Financial Statements in Part I, Item 1, of this Report.

Item 1A. Risk Factors.

The Company's business, financial condition, results of operations and cash flows are subject to various risks that could cause actual results to vary materially from recent results or from anticipated future results. In addition to the other information set forth in this Report, you should carefully consider the risk factors previously disclosed in Part I, Item 1A of our 2022 Form 10-K. There have been no material changes to the risk factors described therein.

Item 2. Unregistered Sales of Equity Securities, Use of Proceeds and Issuer Purchases of Equity Securities.

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

Period	(a) Total Number of Shares Purchased (1)	(b) Average Price Paid Per Share (2)	(c) Total Number of Shares Purchased as part of Publicly Announced Plans or Programs	(d) Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs (3)
July 1 - July 31	2,661	\$ 195.06	—	\$ 86,865,026
August 1 - August 31	130	\$ 204.79	—	\$ 86,865,026
September 1 - September 30	—	\$ —	—	\$ 86,865,026
Total	2,791	\$ 195.37	—	\$ 86,865,026

- (1) All of these shares were acquired from employees related to the surrender of Quaker Chemical Corporation 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 awards or units.
- (2) The price paid for shares acquired from employees pursuant to employee benefit and share-based compensation plans is 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, restricted stock award, or restricted stock unit was granted.
- (3) On May 6, 2015, the Board of Directors of the Company approved, and the Company announced, a 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"), and it has no expiration date. There were no shares acquired by the Company pursuant to the 2015 Share Repurchase Program during the quarter ended September 30, 2023.

Limitation on the Payment of Dividends

The Credit Facility has certain limitations on the payment of dividends and other so-called restricted payment covenants. See Note 14 of Notes to Condensed Consolidated Financial Statements, in Part I, Item 1, of this Report.

Item 5. Other Information.

Insider Trading Arrangements and Policies

No director or officer (as defined in Rule 16a-1(f) promulgated under the Exchange Act) of the Company adopted or terminated any Rule 10b5-1 trading arrangement or any non-Rule 10b5-1 trading arrangement (as such terms are defined in Item 408 of Regulation S-K) during the period covered by this Report except as follows:

On August 31, 2023, Jeewat Bijlani, Executive Vice President, Chief Strategy Officer, entered into a Rule 10b5-1 written trading arrangement intended to satisfy the affirmative defense of Rule 10b5-1(c) under the Securities Exchange Act of 1934, as amended. Mr. Bijlani's trading arrangement covers the sale of up to 2,900 shares of Company common stock and the exercise and sale of up to 6,338 shares of Company common stock upon the exercise of incentive and non-qualified stock options from December 1, 2023 until July 31, 2024.

Item 6. Exhibits.

(a) Exhibits

- 3.1 – [Amended and Restated Articles of Incorporation \(as amended through July 24, 2019\). Incorporated by reference to Exhibit 3.1 as filed by the Registrant with its quarterly report on Form 10-Q filed on August 1, 2019.](#)
- 3.2 – [Amended and Restated By-laws \(effective December 19, 2022\). Incorporated by reference to Exhibit 3.1 as filed by the Registrant within its current report on Form 8-K on December 20, 2022.](#)
- 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 – Inline XBRL Instance Document*
- 101.SCH – Inline XBRL Taxonomy Schema Document*
- 101.CAL – Inline XBRL Taxonomy Calculation Linkbase Document*
- 101.DEF – Inline XBRL Taxonomy Definition Linkbase Document*
- 101.LAB – Inline XBRL Taxonomy Label Linkbase Document*
- 101.PRE – Inline XBRL Taxonomy Presentation Linkbase Document*
- 104 – Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101.INS)*

* Filed herewith.

** Furnished herewith.

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/ Shane W. Hostetter

Date: November 2, 2023

**Shane W. Hostetter, Executive Vice President, Chief Financial Officer
(officer duly authorized on behalf of, and principal financial officer of,
the Registrant)**

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

I, Andrew E. Tometich, 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: November 2, 2023

/s/ Andrew E. Tometich

Andrew E. Tometich
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, Shane W. Hostetter, 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: November 2, 2023

/s/ Shane W. Hostetter

Shane W. Hostetter

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 September 30, 2023 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.

Date: November 2, 2023

/s/ Andrew E. Tometich

Andrew E. Tometich

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 September 30, 2023 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.

Date: November 2, 2023

/s/ Shane W. Hostetter

Shane W. Hostetter

Chief Financial Officer of Quaker Chemical Corporation