

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

FORM 8-K

**CURRENT REPORT
Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): **May 5, 2020**

PQ Group Holdings Inc.

Commission File Number: **001-38221**

Delaware
(State or other jurisdiction of
incorporation or organization)

81-3406833
(I.R.S. Employer
Identification No.)

300 Lindenwood Drive
Malvern, Pennsylvania
(Address of principal executive offices)

19355
(Zip Code)

(610) 651-4400
(Registrant's telephone number, including area code)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

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

Title of each class	Trading symbol	Name of each exchange on which registered
Common stock, par value \$0.01 per share	PQG	New York Stock Exchange

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

Emerging growth company

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

Item 2.02 Results of Operations and Financial Condition.

On May 5, 2020, PQ Group Holdings Inc. issued a press release announcing the reporting of its financial results for the quarter ended March 31, 2020. A copy of the press release is furnished with this Current Report on Form 8-K as Exhibit 99.1 and is incorporated herein by reference.

The information in this Current Report on Form 8-K (including the exhibit attached hereto) shall not be deemed “filed” for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), or otherwise subject to the liabilities of that Section. The information in this Current Report on Form 8-K (including the exhibit attached hereto) shall not be deemed incorporated by reference into any filing or other document under the Securities Act of 1933, as amended, or the Exchange Act, except as shall be expressly set forth by specific reference in such filing or document.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press release issued by PQ Group Holdings Inc. announcing financial results for the quarter ended March 31, 2020
104	The cover page from this Current Report on Form 8-K of PQ Group Holdings Inc., formatted in Inline XBRL and included as Exhibit 101

SIGNATURE

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 hereunto duly authorized.

PQ GROUP HOLDINGS INC.

(Registrant)

Date: May 5, 2020

By

/s/ MICHAEL CREWS

Michael Crews

Executive Vice President and Chief Financial Officer

PQ Group Reports Solid First Quarter 2020 Results; Provides COVID-19 update

- Sales of \$361.6 million increased 0.7%, or 2.3% on constant currency basis;
- Net income of \$0.2 million with diluted EPS of \$0.00; Adjusted net income of \$21.7 million with Adjusted diluted EPS of \$0.16;
- Adjusted EBITDA of \$103.1 million increased 2.1%, or 3.3% on a constant currency basis; Adjusted EBITDA margin of 26.2%;
- Term Loan and Asset Based Lending facilities repriced and extended; and
- Liquidity of \$236.3 million, including cash on hand of \$107.7 million at March 31, 2020

MALVERN, PA, May 5, 2020 -- PQ Group Holdings Inc. (NYSE:PQG) (“PQ” or the “Company”) reported results for the first quarter ended March 31, 2020. Sales of \$361.6 million were up 0.7% versus the same period in 2019, or 2.3% on a constant currency basis, largely benefiting from volume growth in Catalysts, Performance Materials and Refining Services. Net income was \$0.2 million with \$0.00 diluted EPS, which includes a loss impact of (\$7.5 million) with (\$0.06) diluted EPS related to the Performance Materials asset swap transaction. Adjusted net income was \$21.7 million with \$0.16 Adjusted diluted EPS. Adjusted EBITDA was \$103.1 million, up 2.1%, or 3.3% on a constant currency basis, largely on higher sales volumes. Adjusted EBITDA margin was 26.2%.

“We had a solid start to the year, delivering volume growth from three of our four business segments led by North America highway safety in Performance Materials and continued polyolefin growth in Catalysts,” commented Belgacem Chariag, PQ Chairman, President and Chief Executive Officer. “As for the balance of the year, the COVID-19 pandemic has created significant demand uncertainty. We believe our aggressive response, business diversification and financial flexibility position PQ well to navigate through this crisis.”

Review of Segment Results**Refining Services**

Sales of \$100.7 million decreased 4.8% versus the same period in 2019, largely on pass-through of lower sulfur pricing which more than offset higher demand for virgin sulfuric acid. Adjusted EBITDA of \$37.2 million was down 6.3% on higher raw material usage and production costs.

Catalysts

Silica Catalyst sales of \$24.9 million increased 56.6%, or 57.9% on a constant currency basis, versus the same period in 2019, largely driven by continued strong demand for polyolefin catalysts and timing for methyl methacrylate sales. Zeolyst JV sales rose 9.6% on a normalized demand level for emission control catalysts. Adjusted EBITDA of \$22.7 million increased 25.4%, or 26.0% on a constant currency basis, on higher sales volumes.

Performance Materials

Sales of \$65.5 million increased 7.2%, or 9.5% on a constant currency basis. Adjusted EBITDA of \$13.5 million increased 28.6%, or 29.5% on a constant currency basis versus the same period in 2019, due to increased demand for North American highway safety products coupled with favorable weather conditions.

Performance Chemicals

Sales of \$174.3 million decreased 3.4%, or 1.1% on a constant currency basis, versus the same period in 2019 on slower global demand for detergents and personal care products in Latin America. Adjusted EBITDA of \$40.5 million decreased 5.2%, or 2.8% on a constant currency basis, due to lower sales volumes.

COVID-19 Update and 2020 Outlook

“Our highest priority is the health and safety of our employees and their families,” said Chariag. “In addition, our focus has been on serving our customers while ensuring that our plant operations are in compliance with recommended preventive and safety measures.”

PQ’s businesses and many of its vendors and customers have been able to continue operations through the pandemic as essential businesses under government regulations. While there have been some modest production delays through the first quarter, PQ has not experienced material operational issues in terms of facility shutdowns or its supply chain.

“At the executive leadership and Board levels, we are continuously monitoring the situation,” Chariag concluded. “While we continue to believe in the favorable long-term demand drivers for our businesses, the pandemic is expected to reduce demand in the near- to mid-term. We will continue to navigate through this crisis to mitigate the impacts on PQ and its employees, customers and shareholders.”

Liquidity and Balance Sheet

At March 31, 2020, the Company had total debt outstanding of \$1,996.8 million. During the quarter ended March 31, 2020, the Company amended its Term Loan Facility to reduce the applicable interest rate and extend the maturity of the facility to February 2027 and amended its ABL Credit Agreement to reduce the applicable interest rate, extend the maturity to March 2025 and increase the aggregate amount of the revolving loan commitments available by \$50.0 million to \$250.0 million.

With total available liquidity of \$236.3 million, including cash and cash equivalents of \$107.7 million at March 31, 2020, PQ is well positioned to meet anticipated future cash and business needs during this period of uncertainty. With the recent amendments and extensions of its Term Loan and ABL Credit Agreement, PQ has no significant debt maturities prior to November 2022. Additionally, PQ’s outstanding debt obligations do not contain material financial covenants requiring it to maintain a leverage ratio below a particular level.

PQ is undertaking additional steps to enhance its liquidity by lowering discretionary costs and capital expenditures. Furthermore, business optimization initiatives continue, including the potential for asset monetization transactions. These actions will help to mitigate the potential prolonged effects of a challenging demand environment.

2020 Financial Outlook

Due to the uncertainty of COVID-19 related impact on near term demand trends, we are withdrawing our previously announced annual 2020 financial outlook except for the below:

- Adjusted free cash flow in range of \$130 million to \$150 million, revised from a range of \$155 million to \$175 million
- Adjusted EBITDA margin in range of mid-20 percent

Conference Call and Webcast Details

On Tuesday, May 5, 2020, PQ management will review the results during a conference call and audio-only webcast scheduled for 11:00 a.m. Eastern Time.

Conference Call: Investors may listen to the conference call live via telephone by dialing 1 (877) 883-0383 (domestic) or 1 (412) 902-6506 (international) and use the participant code 4111683.

Webcast: An audio-only live webcast of the conference call and presentation materials can be accessed at <http://investor.pqcorp.com>.

A replay of the conference call/webcast will be made available at <http://investor.pqcorp.com/events-presentations>.

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About PQ Group Holdings Inc.

PQ Group Holdings Inc. and subsidiaries is a leading integrated and innovative global provider of specialty catalysts, materials, chemicals and services. We support customers globally through our strategically located network of manufacturing facilities. We believe that our products, which are predominantly inorganic, and services contribute to improving the sustainability of the environment.

We have four uniquely positioned specialty businesses: *Refining Services* provides sulfuric acid recycling to the North American refining industry; *Catalysts* serves the packaging and engineering plastics and the global refining, petrochemical and emissions control industries; *Performance Materials* produces transportation reflective safety markings for roads and airports; and *Performance Chemicals* supplies diverse product end uses, including personal and industrial cleaning products, fuel-efficient tires, surface coatings, and food and beverage products.

We serve over 4,000 customers globally across many end uses and operate over 70 manufacturing facilities which are strategically located across six continents. For more information, see our website at <https://www.pqcorp.com>.

Presentation of Non-GAAP Financial Measures

In addition to the results provided in accordance with U.S. generally accepted accounting principles (“GAAP”) throughout this press release, the Company has provided non-GAAP financial measures—Adjusted EBITDA, Adjusted EBITDA margin, Adjusted free cash flow, Adjusted net income, Adjusted EPS, Adjusted diluted EPS, constant currency sales and constant currency Adjusted EBITDA—which present results on a basis adjusted for certain items. The Company uses these non-GAAP financial measures for business planning purposes and in measuring its performance relative to that of its competitors. The Company believes that these non-GAAP financial measures are useful financial metrics to assess its operating performance from period-to-period by excluding certain items that the Company believes are not representative of its core business. These non-GAAP financial measures are not intended to replace, and should not be considered superior to, the presentation of the Company’s financial results in accordance with GAAP. The use of the terms Adjusted EBITDA, Adjusted EBITDA margin, Adjusted free cash flow, Adjusted net income, Adjusted EPS, Adjusted diluted EPS, constant currency sales and constant currency Adjusted EBITDA may differ from similar measures reported by other companies and may not be comparable to other similarly titled measures. Adjusted EBITDA, Adjusted free cash flow, Adjusted net income, Adjusted EPS, Adjusted diluted EPS, constant currency sales and constant currency Adjusted EBITDA are reconciled from the respective measures under GAAP in the appendix below.

In discussing our operating results, the term currency exchange rates refers to the currency exchange rates we use to convert the operating results for all countries where the functional currency is not the U.S. dollar. We calculate constant currency sales and constant currency Adjusted EBITDA by translating current period results at the prior period’s currency exchange rates. When we refer to constant currency sales and constant currency Adjusted EBITDA, this means sales and Adjusted EBITDA without the impact of the currency exchange rate fluctuations from period-to period.

The Company is not able to provide a reconciliation of the Company’s non-GAAP financial guidance to the corresponding GAAP measures without unreasonable effort because of the inherent difficulty in forecasting and quantifying certain amounts necessary for such a reconciliation such as certain non-cash, nonrecurring or other items that are included in net income and EBITDA as well as the related tax impacts of these items and asset dispositions / acquisitions and changes in foreign currency exchange rates that are included in cash flow, due to the uncertainty and variability of the nature and amount of these future charges and costs.

Zeolyst Joint Venture

The Company's zeolite catalysts product group operates through its Zeolyst Joint Venture, which is accounted for as an equity method investment in accordance with GAAP. The presentation of the Zeolyst Joint Venture's sales represents 50% of the sales of the Zeolyst Joint Venture. The Company does not record sales by the Zeolyst Joint Venture as revenue and such sales are not consolidated within the Company's results of operations. However, the Company's Adjusted EBITDA reflects the share of earnings of the Zeolyst Joint Venture that have been recorded as equity in net income from affiliated companies in the Company's consolidated statements of income for such periods and includes Zeolyst Joint Venture adjustments on a proportionate basis based on the Company's 50% ownership interest. Accordingly, the Company's Adjusted EBITDA margins are calculated including 50% of the sales of the Zeolyst Joint Venture for the relevant periods in the denominator.

Note on Forward-Looking Statements

Some of the information contained in this press release constitutes "forward-looking statements." Forward-looking statements can be identified by words such as "anticipates," "intends," "plans," "seeks," "believes," "estimates," "expects," "projects" and similar references to future periods. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Examples of forward-looking statements include, but are not limited to, statements regarding our future results of operations, financial condition, liquidity, prospects, growth, strategies, product and service offerings, including the impact of the COVID-19 pandemic on such items and our 2020 financial outlook. Our actual results may differ materially from those contemplated by the forward-looking statements. We caution you, therefore, against relying on any of these forward-looking statements. They are neither statements of historical fact nor guarantees or assurances of future performance. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, but are not limited to, regional, national or global political, economic, business, competitive, market and regulatory conditions, including the ongoing COVID-19 pandemic, tariffs and trade disputes, currency exchange rates and other factors, including those described in the sections titled "Risk Factors" and "Management Discussion & Analysis of Financial Condition and Results of Operations" in our filings with the SEC, which are available on the SEC's website at www.sec.gov. These forward-looking statements speak only as of the date of this release. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by applicable law.

PQ GROUP HOLDINGS INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF INCOME
(in millions, except share and per share amounts)

	Three months ended March 31,		% Change
	2020	2019	
Sales	\$ 361.6	\$ 359.2	0.7 %
Cost of goods sold	273.0	278.3	(1.9)%
Gross profit	88.6	80.9	9.5 %
Selling, general and administrative expenses	43.3	40.7	6.4 %
Other operating expense, net	21.9	10.8	102.8 %
Operating income	23.4	29.4	(20.4)%
Equity in net (income) from affiliated companies	(8.4)	(2.1)	300.0 %
Interest expense, net	24.5	28.6	(14.3)%
Debt extinguishment costs	2.5	—	— %
Other (income) expense, net	2.9	(3.0)	(196.7)%
Income before income taxes and noncontrolling interest	1.9	5.9	(67.8)%
Provision for income taxes ⁽¹⁾	1.4	2.4	(41.7)%
<i>Effective tax rate</i>	73.7 %	41.6 %	
Net income	0.5	3.5	(85.7)%
Less: Net income attributable to the noncontrolling interest	0.3	0.3	— %
Net income attributable to PQ Group Holdings Inc.	\$ 0.2	\$ 3.2	(93.8)%
Earnings per share:			
Basic earnings per share	\$ —	\$ 0.02	
Diluted earnings per share	\$ —	\$ 0.02	
Weighted average shares outstanding:			
Basic	135,240,897	133,946,308	
Diluted	136,086,082	134,894,354	

⁽¹⁾ Net of a \$1.9 million and \$0.5 million provision for Global Intangible Low-Taxed Income (“GILTI”) for the three months ended March 31, 2020 and March 31, 2019, respectively.

PQ GROUP HOLDINGS INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED BALANCE SHEETS
(in millions, except share and per share amounts)

	March 31, 2020	December 31, 2019
ASSETS		
Cash and cash equivalents	\$ 107.7	\$ 72.3
Accounts receivable, net	197.1	179.6
Inventories, net	265.0	280.9
Prepaid and other current assets	41.2	35.8
Total current assets	611.0	568.6
Investments in affiliated companies	479.2	472.9
Property, plant and equipment, net	1,147.9	1,186.8
Goodwill	1,248.7	1,259.8
Other intangible assets, net	652.3	676.4
Right-of-use lease assets	53.7	57.3
Other long-term assets	104.0	99.1
Total assets	\$ 4,296.8	\$ 4,320.9
LIABILITIES		
Notes payable and current maturities of long-term debt	\$ 8.5	\$ 7.8
Accounts payable	127.3	144.4
Operating lease liabilities—current	15.2	15.2
Accrued liabilities	95.3	102.2
Total current liabilities	246.3	269.6
Long-term debt, excluding current portion	1,961.7	1,899.2
Deferred income taxes	215.0	218.0
Operating lease liabilities—noncurrent	38.1	40.2
Other long-term liabilities	94.6	108.6
Total liabilities	2,555.7	2,535.6
Commitments and contingencies		
EQUITY		
Common stock (\$0.01 par); authorized shares 450,000,000; issued shares 137,313,883 and 136,861,382 on March 31, 2020 and December 31, 2019, respectively; outstanding shares 136,596,198 and 136,464,961 on March 31, 2020 and December 31, 2019, respectively	1.4	1.4
Preferred stock (\$0.01 par); authorized shares 50,000,000; no shares issued or outstanding on March 31, 2020 and December 31, 2019	—	—
Additional paid-in capital	1,703.0	1,696.9
Retained earnings	103.2	103.0
Treasury stock, at cost; shares 717,685 and 396,421 on March 31, 2020 and December 31, 2019, respectively	(10.4)	(6.5)
Accumulated other comprehensive loss	(58.8)	(15.4)
Total PQ Group Holdings Inc. equity	1,738.4	1,779.4
Noncontrolling interest	2.7	5.9
Total equity	1,741.1	1,785.3
Total liabilities and equity	\$ 4,296.8	\$ 4,320.9

PQ GROUP HOLDINGS INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS

	Three months ended	
	March 31,	
	2020	2019
	(in millions)	
Cash flows from operating activities:		
Net income	\$ 0.5	\$ 3.5
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	33.5	33.2
Amortization	12.2	12.7
Amortization of deferred financing costs and original issue discount	1.3	1.4
Foreign currency exchange (gain) loss	3.3	(2.7)
Pension and postretirement healthcare benefit expense	(0.1)	1.2
Pension and postretirement healthcare benefit funding	(3.2)	(3.4)
Deferred income tax (benefit) provision	(1.5)	1.2
Net loss on asset disposals	9.4	0.8
Stock compensation	5.9	3.4
Equity in net income from affiliated companies	(8.4)	(2.1)
Dividends received from affiliated companies	—	5.0
Net interest income on swaps designated as net investment hedges	(1.8)	(3.9)
Other, net	(0.6)	(3.6)
Working capital changes that provided (used) cash, excluding the effect of acquisitions and dispositions:		
Receivables	(26.1)	1.1
Inventories	(9.7)	(19.2)
Prepays and other current assets	(0.7)	2.9
Accounts payable	(1.3)	(3.9)
Accrued liabilities	(8.2)	(0.8)
Net cash provided by operating activities	4.5	26.8
Cash flows from investing activities:		
Purchases of property, plant and equipment	(28.1)	(33.6)
Proceeds from sale of assets	2.4	—
Proceeds from sale of investment	1.8	—
Net interest proceeds on swaps designated as net investment hedges	1.8	3.9
Other, net	—	0.5
Net cash used in investing activities	(22.1)	(29.2)
Cash flows from financing activities:		
Draw down of revolving credit facilities	117.4	32.4
Repayments of revolving credit facilities	(52.7)	(28.9)
Debt issuance costs	(3.0)	—
Repayments of long-term debt	—	(5.0)
Stock repurchases	(3.9)	(1.3)
Other, net	0.4	0.3
Net cash provided by (used in) financing activities	58.2	(2.5)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(4.2)	(0.7)
Net change in cash, cash equivalents and restricted cash	36.4	(5.6)
Cash, cash equivalents and restricted cash at beginning of period	73.9	59.7
Cash, cash equivalents and restricted cash at end of period	\$ 110.3	\$ 54.1

Appendix Table A-1: Reconciliation of Net Income to Segment Adjusted EBITDA

	Three months ended March 31,	
	2020	2019
(in millions)		
Reconciliation of net income attributable to PQ Group Holdings Inc. to Segment Adjusted EBITDA		
Net income attributable to PQ Group Holdings Inc.	\$ 0.2	\$ 3.2
Provision for income taxes	1.4	2.4
Interest expense, net	24.5	28.6
Depreciation and amortization	45.7	45.9
EBITDA	71.8	80.1
Joint venture depreciation, amortization and interest ^(a)	3.8	3.8
Amortization of investment in affiliate step-up ^(b)	1.7	2.6
Debt extinguishment costs	2.5	—
Net loss on asset disposals ^(c)	9.4	0.8
Foreign currency exchange loss (gain) ^(d)	3.3	(2.7)
LIFO expense ^(e)	(0.3)	10.2
Transaction and other related costs ^(f)	2.1	0.1
Equity-based compensation	5.9	3.4
Restructuring, integration and business optimization expenses ^(g)	2.0	0.7
Defined benefit pension plan (benefit) cost ^(h)	(0.2)	1.0
Other ⁽ⁱ⁾	1.1	1.0
Adjusted EBITDA	103.1	101.0
Unallocated corporate expenses	10.7	10.0
Segment Adjusted EBITDA	\$ 113.8	\$ 111.0

Descriptions to PQ Non-GAAP Reconciliations

- (a) We use Adjusted EBITDA as a performance measure to evaluate our financial results. Because our Catalysts segment includes our 50% interest in the Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of the Zeolyst Joint Venture.
- (b) Represents the amortization of the fair value adjustments associated with the equity affiliate investment in the Zeolyst Joint Venture as a result of the combination of the businesses of PQ Holdings Inc. and Eco Services Operations LLC in May 2016 (the “Business Combination”). We determined the fair value of the equity affiliate investment and the fair value step-up was then attributed to the underlying assets of the Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with fixed assets and intangible assets, including customer relationships and technical know-how.
- (c) When asset disposals occur, we remove the impact of net gain/loss of the disposed asset because such impact primarily reflects the non-cash write-off of long-lived assets no longer in use.
- (d) Reflects the exclusion of the foreign currency transaction gains and losses in the statements of income primarily related to the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.
- (e) Represents non-cash adjustments to the Company’s LIFO reserves for certain inventories in the U.S. that are valued using the LIFO method, which we believe provides a means of comparison to other companies that may not use the same basis of accounting for inventories.
- (f) Relates to certain transaction costs, including debt financing, due diligence and other costs related to transactions that are completed, pending or abandoned, that we believe are not representative of our ongoing business operations.
- (g) Includes the impact of restructuring, integration and business optimization expenses which are incremental costs that are not representative of our ongoing business operations.
- (h) Represents adjustments for defined benefit pension plan (benefit) costs in our statements of income. More than two-thirds of our defined benefit pension plan obligations are under defined benefit pension plans that are frozen, and the remaining obligations primarily relate to plans operated in certain of our non-U.S. locations that, pursuant to jurisdictional requirements, cannot be frozen. As such, we do not view such income or expenses as core to our ongoing business operations.
- (i) Other costs consist of certain expenses that are not core to our ongoing business operations, including environmental remediation-related costs associated with the legacy operations of our business prior to the Business Combination, capital and franchise taxes, non-cash asset retirement obligation accretion and the initial implementation of procedures to comply with Section 404 of the Sarbanes-Oxley Act. Included in this line-item are rounding discrepancies that may arise from rounding from dollars (in thousands) to dollars (in millions).

Appendix Table A-2: Reconciliation of Net Income to Adjusted Net Income⁽¹⁾

	Three months ended March 31,					
	2020			2019		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income before non-controlling interest	\$ 1.9	\$ 1.4	\$ 0.5	\$ 5.9	\$ 2.4	\$ 3.5
Less: Net income attributable to non-controlling interest	0.3	—	0.3	0.3	—	0.3
Net income attributable to PQ Group Holdings Inc.	1.6	1.4	0.2	5.6	2.4	3.2
Earnings per share:						
Basic earnings per share			\$ —			\$ 0.02
Diluted earnings per share			\$ —			\$ 0.02
Net income attributable to PQ Group Holdings Inc.	\$ 1.6	\$ 1.4	\$ 0.2	\$ 5.6	\$ 2.4	\$ 3.2
Amortization of investment in affiliate step-up ^(b)	1.7	0.6	1.1	2.6	1.0	1.6
Debt extinguishment costs	2.5	0.9	1.6	—	—	—
Net loss on asset disposals ^(c)	9.4	2.3	7.1	0.8	0.3	0.5
Foreign currency exchange loss (gain) ^(d)	3.3	2.3	1.0	(2.7)	(0.7)	(2.0)
LIFO expense ^(e)	(0.3)	(0.1)	(0.2)	10.2	3.7	6.5
Transaction and other related costs ^(f)	2.1	0.8	1.3	0.1	—	0.1
Equity-based compensation	5.9	2.1	3.8	3.4	1.2	2.2
Restructuring, integration and business optimization expenses ^(g)	2.0	0.7	1.3	0.7	0.2	0.5
Defined benefit plan pension (benefit) cost ^(h)	(0.2)	(0.1)	(0.1)	1.0	0.4	0.6
Other ⁽ⁱ⁾	1.1	0.4	0.7	1.0	0.4	0.6
Adjusted Net Income, including non-cash GILTI tax	29.1	11.3	17.8	22.7	8.9	13.8
Impact of non-cash GILTI tax ⁽²⁾	—	(3.9)	3.9	—	(3.7)	3.7
Adjusted Net Income ⁽¹⁾	\$ 29.1	\$ 7.4	\$ 21.7	\$ 22.7	\$ 5.2	\$ 17.5
Adjusted earnings per share:						
Adjusted basic earnings per share			\$ 0.16			\$ 0.13
Adjusted diluted earnings per share			\$ 0.16			\$ 0.13
Weighted average shares outstanding:						
Basic			135,240,897			133,946,308
Diluted			136,086,082			134,894,354

See Appendix Table A-1 for Descriptions to PQ Non-GAAP Reconciliations in the table above.

⁽¹⁾ We define adjusted net income as net income attributable to PQ Group Holdings adjusted for non-operating income or expense and the impact of certain non-cash or other items that are included in net income that we do not consider indicative of our ongoing operating performance. Adjusted net income is presented as a key performance indicator as we believe it will enhance a prospective investor's understanding of our results of operations and financial condition. Adjusted net income may not be comparable with net income or adjusted net income as defined by other companies.

⁽²⁾ Amount represents the impact to tax expense in net income before non-controlling interest and the related adjustments to net income associated with GILTI provisions of the Tax Cuts and Jobs Act of 2017 (“TCJA”). As of January 1, 2018, GILTI results in taxation of “excess of foreign earnings,” which is defined as amounts greater than a 10% rate of return on applicable foreign tangible asset basis. The Company is required to record incremental tax provision impact with respect to GILTI as a result of having historical U.S. net operating loss (“NOL”) amounts to offset the GILTI taxable income inclusion. This NOL utilization precludes us from recognizing foreign tax credits (“FTCs”) which would otherwise help offset the tax impacts of GILTI. No FTCs will be recognized with respect to GILTI until our cumulative NOL balance has been exhausted. Because the GILTI provision does not impact our cash taxes (given available U.S. NOLs), and given that we expect to recognize FTCs to offset GILTI impacts once the NOLs are exhausted, we do not view this item as a component of core operations.

Appendix Table A-3: Business Segment Sales and Adjusted EBITDA

	Three months ended March 31,		% Change
	2020	2019	
Sales:			
Refining Services	\$ 100.7	\$ 105.8	(4.8) %
Silica Catalysts	24.9	15.9	56.6 %
Performance Materials	65.5	61.1	7.2 %
Performance Chemicals	174.3	180.5	(3.4) %
Eliminations	(3.8)	(4.1)	
Total sales	<u>\$ 361.6</u>	<u>\$ 359.2</u>	<u>0.7 %</u>
Zeolyst joint venture sales	\$ 32.3	\$ 29.5	9.6 %
Adjusted EBITDA:			
Refining Services	\$ 37.2	\$ 39.7	(6.3) %
Catalysts	22.7	18.1	25.4 %
Performance Materials	13.5	10.5	28.6 %
Performance Chemicals	40.5	42.7	(5.2) %
Total Segment Adjusted EBITDA	<u>\$ 113.8</u>	<u>\$ 111.0</u>	<u>2.5 %</u>
Corporate	(10.7)	(10.0)	7.0 %
Total Adjusted EBITDA	<u><u>\$ 103.1</u></u>	<u><u>\$ 101.0</u></u>	<u><u>2.1 %</u></u>
Adjusted EBITDA Margin:			
Refining Services	36.9 %	37.5 %	
Catalysts ⁽¹⁾	39.7 %	40.0 %	
Performance Materials	20.6 %	17.2 %	
Performance Chemicals	23.2 %	23.7 %	
Total Adjusted EBITDA Margin⁽¹⁾	<u><u>26.2 %</u></u>	<u><u>26.0 %</u></u>	

⁽¹⁾ Adjusted EBITDA margin calculation includes proportionate 50% share of sales from the Zeolyst joint venture.

Appendix Table A-4: Constant Currency Sales and Adjusted EBITDA

The tables below reflect the calculation of constant currency sales and constant currency Adjusted EBITDA by segment for the three months ended March 31, 2020

	Three months ended March 31, 2020			Three months ended March 31, 2019		% Change
	As Reported	FX	Constant Currency	As Reported		
(in millions, except percentages)						
Sales:						
Refining Services	\$ 100.7	\$ —	\$ 100.7	\$ 105.8		(4.8) %
Silica Catalysts	24.9	0.2	25.1	15.9		57.9 %
Performance Materials	65.5	1.4	66.9	61.1		9.5 %
Performance Chemicals	174.3	4.2	178.5	180.5		(1.1) %
Eliminations	(3.8)	(0.1)	(3.9)	(4.1)		(4.9) %
Total sales	\$ 361.6	\$ 5.7	\$ 367.3	\$ 359.2		2.3 %
Zeolyst joint venture sales	\$ 32.3	\$ —	\$ 32.3	\$ 29.5		9.6 %
Adjusted EBITDA:						
Refining Services	\$ 37.2	\$ —	\$ 37.2	\$ 39.7		(6.3) %
Catalysts	22.7	0.1	22.8	18.1		26.0 %
Performance Materials	13.5	0.1	13.6	10.5		29.5 %
Performance Chemicals	40.5	1.0	41.5	42.7		(2.8) %
Total Segment Adjusted EBITDA	\$ 113.8	\$ 1.2	\$ 115.0	\$ 111.0		3.6 %
Corporate	(10.7)	—	(10.7)	(10.0)		7.0 %
Total Adjusted EBITDA	\$ 103.1	\$ 1.2	\$ 104.3	\$ 101.0		3.3 %

Appendix Table A-5: Adjusted Free Cash Flow

	Three months ended March 31,	
	2020	2019
	(in millions)	
Net cash provided by operating activities	\$ 4.5	\$ 26.8
Less:		
Purchases of property, plant and equipment ⁽¹⁾	(28.1)	(33.6)
Free cash flow	<u>(23.6)</u>	<u>(6.8)</u>
Adjustments to free cash flow:		
Proceeds from sale of assets	2.4	—
Net interest proceeds on currency swaps	1.8	3.9
Adjusted free cash flow ⁽²⁾	<u>\$ (19.4)</u>	<u>\$ (2.9)</u>
Net cash used in investing activities ⁽³⁾	\$ (22.1)	\$ (29.2)
Net cash used in financing activities	\$ 58.2	\$ (2.5)

⁽¹⁾ Excludes the Company's proportionate 50% share of capital expenditures from the Zeolyst joint venture.

⁽²⁾ We define adjusted free cash flow as net cash provided by operating activities less purchases of property, plant and equipment, adjusted for proceeds from sale of assets and net interest proceeds on swaps designated as net investment hedges. Adjusted free cash flow is a non-GAAP financial measure that we believe will enhance a prospective investor's understanding of our ability to generate additional cash from operations, including the reduction in cash paid for interest related to our cross-currency interest rate swaps, and is an important financial measure for use in evaluating our financial performance. Our presentation of adjusted free cash flow is not intended to replace, and should not be considered superior to, the presentation of our net cash provided by operating activities determined in accordance with GAAP. Additionally, our definition of adjusted free cash flow is limited, in that it does not represent residual cash flows available for discretionary expenditures, due to the fact that the measure does not deduct the payments required for debt service and other contractual obligations or payments made for business acquisitions. Therefore, we believe it is important to view adjusted free cash flow as a measure that provides supplemental information to our consolidated statements of cash flows.

⁽³⁾ Net cash used in investing activities includes purchases of property, plant and equipment, proceeds from sale of assets and net interest proceeds on swaps designated as net investment hedges, which are also included in our computation of adjusted free cash flow.