
**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): July 30, 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 July 30, 2020, PQ Group Holdings Inc. issued a press release announcing the reporting of its financial results for the quarter ended June 30, 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 June 30, 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.

Date: July 30, 2020

PQ Group Holdings Inc.

By: /s/ MICHAEL CREWS
Name: Michael Crews
Title: Executive Vice President and Chief Financial Officer

**PQ Group Reports Second Quarter 2020 Results:
\$16 Million Net Income and \$113 Million Adjusted EBITDA With Robust Margin of 28%;
Reinitiating 2020 Guidance and Raising 2020 Adjusted Free Cash Flow to \$145 to \$155 Million**

- Sales of \$359.5 million and Net income of \$15.9 million with diluted EPS of \$0.12; Adjusted net income of \$30.0 million with Adjusted diluted EPS of \$0.22;
- Adjusted EBITDA of \$113.0 million; Adjusted EBITDA margin of 28.2% in line with prior year on effective cost management actions;
- Monetization of non-strategic assets leads to ~\$27 million in cash proceeds (\$18 million of which was received on July 1, 2020)
- Secured notes refinancing significantly lowers interest costs and extends maturities

MALVERN, PA, July 30, 2020 -- PQ Group Holdings Inc. (NYSE:PQG) ("PQ" or the "Company") today reported results for the second quarter ended June 30, 2020. Sales of \$359.5 million decreased 16.7% compared with the same period in 2019, or 14.4% on a constant currency basis, largely on lower volume from COVID-19 impacts related to stay-at-home mandates and demand disruption for industrial applications. Net income was \$15.9 million with \$0.12 diluted EPS and Adjusted net income was \$30.0 million with \$0.22 Adjusted diluted EPS. Adjusted EBITDA of \$113.0 million declined 14.7% from the prior year, or 12.6% on a constant currency basis, as the effects of lower sales volumes were mitigated by PQ's active management of production and costs that drove a robust Adjusted EBITDA margin of 28.2%.

"PQ's favorable second quarter performance demonstrates the resilience of our portfolio and the impressive execution of the team, which quickly adjusted our cost structure to hold the line on margins despite the stiff macroeconomic headwinds," said Belgacem Chariag, PQ Chairman, President and Chief Executive Officer. "Based on current visibility into demand trends for the balance of the year, we are pleased to reinitiate 2020 financial guidance and raise our expectations for our annual Adjusted free cash flow to \$145 to \$155 million, with Adjusted EBITDA margin now expected to be in line with 2019 levels."

Review of Segment Results

While second quarter macroeconomic activity experienced a sharp downdraft from the prior year, the quarter was marked by solid month-to-month improvement through June on rebounding driving activity and industrial demand. Approximately 70% of product sales are expected to come from end uses that are stable or improving in the second half of 2020. For PQ, favorable end-use conditions in regeneration services, highway striping, personal care and other product lines are expected to be more than offset by deferral of specialty and hydrocracking catalysts to 2021.

Refining Services

Regeneration services demand was predominately shaped by gasoline consumption that recovered late in the quarter following lows in April. By the end of June, U.S. gasoline use had improved 70% from its lows in early April and returned to about 90% of 2019 levels. Virgin sulfuric acid experienced automotive and industrial production demand declines that were in line with PQ's expectations. For the remainder of 2020, gasoline consumption is anticipated to exceed 90% of 2019 levels, reflecting a blend of reopening activities and likely containment setbacks. The Company expects a stronger recovery for regeneration services and improving demand for virgin sulfuric acid.

Sales of \$90.4 million and Adjusted EBITDA of \$35.0 million decreased 22.9% and 18.2%, respectively, versus the same period in 2019. Lower gasoline consumption reduced demand for regeneration services and weakness in automotive and industrial applications affected virgin sulfuric acid sales, which were mitigated by a sharp reduction in costs.

Catalysts

For polyethylene, elevated demand for packaging largely normalized while demand for construction and consumer discretionary items began to recover as the second quarter progressed. Within refining and emission control, after a strong first half, demand is expected to be soft in the second half with change-outs by refineries deferred to 2021 and heavy-duty diesel truck production down more than 30% versus 2019 levels.

Silica Catalysts sales of \$25.2 million increased 20.6%, or 23.9% on a constant currency basis, versus the same period in 2019, largely driven by higher sales for both chemical and polyolefin catalysts. Zeolyst JV sales of \$41.0 million rose 4.9% as higher sales volumes for specialty and hydrocracking catalysts more than offset lower demand for emission control catalysts. Adjusted EBITDA of \$25.3 million decreased 14.5%, or 13.5% on a constant currency basis, largely on unfavorable fixed cost absorption from inventory reductions to align with expected second half demand.

Performance Materials

North American highway striping activity remains healthy, with demand for European highway safety lagging. Within engineered glass materials, metal finishing and polymer additive demand remains suppressed, but orders are improving as industrial activity resumes.

Second quarter sales of \$104.3 million decreased 12.3%, or 11.0% on a constant currency basis, as steady North America highway sales volumes and price were more than offset by slower recovery in European highway activities and lower global industrial demand for engineered glass materials. Adjusted EBITDA of \$27.3 million decreased 6.5%, or 5.1% on a constant currency basis, versus the same period in 2019 as effective cost reduction actions mitigated the volume impact.

Performance Chemicals

Stay-at-home trends have translated into higher demand for personal care, cleaning products and detergents, which exceeded expectations in the second quarter but may normalize in the second half. As expected, industrial applications were negatively impacted while demand for beer and coatings are improving. PQ expects demand for the industrial product line to recover gradually as automotive and tire production rebound.

Sales of \$142.6 million decreased 19.8%, or 15.4% on a constant currency basis, versus the same period in 2019 on demand weakness within several applications that more than offset stability in global specialty silicas. Adjusted EBITDA of \$34.0 million decreased 17.5%, or 12.4% on a constant currency basis, on lower sales volumes that were partly offset by expanding margins.

Balance Sheet and Liquidity

At June 30, 2020, PQ had total available liquidity of \$285.3 million, including cash and cash equivalents of \$88.6 million. On July 22, 2020, PQ further improved its financial position by closing on a new \$650 million senior secured term loan facility with a floating interest rate of LIBOR (with a 1.0% minimum LIBOR floor) plus 3.0% per annum, maturing in February 2027. Proceeds were used to redeem the Company's 6.750% 2022 Senior Secured Notes. PQ's collective financing activities in the first half of 2020 resulted in the lowering of annual cash interest by approximately \$19 million (at current rates) and extended all material debt maturities to 2025 or later with prepayment flexibility.

"We were pleased to further enhance our financial flexibility, lower interest expense, reduce our cost of capital and extend maturities with the refinancings," said PQ Executive Vice President and Chief Financial Officer Mike Crews. "PQ has reduced debt by approximately \$770 million and lowered annualized cash interest by more than \$100 million since our initial public offering in 2017, and we look to continue to de-lever over time."

2020 Financial Outlook

“PQ is executing well operationally and commercially, delivering good financial results in a challenging environment and continuing to optimize the portfolio,” said Chariag. “Looking ahead, we see the vast majority of PQ’s end uses as either favorable or improving, even as we are mindful of the cautious global economic environment that surrounds us all. We are appropriately managing costs and exercising capital discipline, while we build capabilities and invest for targeted growth.”

The Company provided full-year 2020 guidance which includes:

- Sales of \$1,430 to \$1,460 million⁽¹⁾
- Adjusted EBITDA of \$410 to \$425 million
- Adjusted EBITDA margin of ~27% in line with 2019 margins
- Adjusted diluted EPS of \$0.67 to \$0.86
- Adjusted free cash flow in the range of \$145 to \$155 million, excluding \$18 million in cash proceeds from product line sale; increased from \$130 to \$150 million

⁽¹⁾GAAP sales only; Excludes proportionate 50% share of Zeolyst Joint Venture sales target of \$120 to \$130 million

Conference Call and Webcast Details

On Thursday, July 30, 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 5849647.

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>.

Investor Contact:

Nahla A. Azmy
(610) 651-4561
Nahla.Azmy@pqcorp.com

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 (collectively, “Non-GAAP Financial Measures”) —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 Non-GAAP Financial Measures terms may differ from similar measures reported by other companies and may not be comparable to other similarly titled measures. These Non-GAAP Financial Measures 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, expected demand trends 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 June 30,			Six months ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Sales	\$ 359.5	\$ 431.7	(16.7)%	\$ 721.1	\$ 790.9	(8.8)%
Cost of goods sold	266.7	316.2	(15.7)%	539.7	594.5	(9.2)%
Gross profit	92.8	115.5	(19.7)%	181.4	196.4	(7.6)%
Selling, general and administrative expenses	38.9	43.4	(10.4)%	82.2	84.1	(2.3)%
Other operating expense, net	12.7	1.8	605.6 %	34.7	12.6	175.4 %
Operating income	41.2	70.3	(41.4)%	64.5	99.7	(35.3)%
Equity in net (income) from affiliated companies	(11.5)	(12.3)	(6.5)%	(19.8)	(14.4)	37.5 %
Interest expense, net	22.3	28.5	(21.8)%	46.7	57.2	(18.4)%
Debt extinguishment costs	—	—	— %	2.5	—	— %
Other (income) expense, net	(2.1)	3.1	(167.7)%	0.6	—	— %
Income before income taxes and noncontrolling interest	32.5	51.0	(36.3)%	34.5	56.9	(39.4)%
Provision for income taxes ⁽¹⁾	16.3	20.3	(19.7)%	17.7	22.8	(22.4)%
<i>Effective tax rate</i>	50.0 %	39.8 %		51.4 %	40.0 %	
Net income	16.2	30.7	(47.2)%	16.8	34.1	(50.7)%
Less: Net income attributable to the noncontrolling interest	0.3	0.1	200.0 %	0.6	0.4	50.0 %
Net income attributable to PQ Group Holdings Inc.	\$ 15.9	\$ 30.6	(48.0)%	\$ 16.2	\$ 33.7	(51.9)%
Earnings per share:						
Basic earnings per share	\$ 0.12	\$ 0.23		\$ 0.12	\$ 0.25	
Diluted earnings per share	\$ 0.12	\$ 0.23		\$ 0.12	\$ 0.25	
Weighted average shares outstanding:						
Basic	135,083,126	134,142,552		135,278,764	134,044,972	
Diluted	135,671,830	135,323,024		136,079,540	135,107,007	

⁽¹⁾ Net of a \$4.1 million and \$6.0 million provision for Global Intangible Low-Taxed Income (“GILTI”) for the three and six months ended June 30, 2020, respectively. Net of a \$7.8 million and \$7.3 million provision for Global Intangible Low-Taxed Income (“GILTI”) for the three and six months ended June 30, 2019, respectively.

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

	<u>June 30,</u> <u>2020</u>	<u>December 31,</u> <u>2019</u>
ASSETS		
Cash and cash equivalents	\$ 88.6	\$ 72.3
Accounts receivable, net	197.8	179.6
Inventories, net	266.6	280.9
Prepaid and other current assets	34.7	35.8
Total current assets	587.7	568.6
Investments in affiliated companies	476.7	472.9
Property, plant and equipment, net	1,132.7	1,186.8
Goodwill	1,255.0	1,259.8
Other intangible assets, net	643.2	676.4
Right-of-use lease assets	50.3	57.3
Other long-term assets	101.6	99.1
Total assets	\$ 4,247.2	\$ 4,320.9
LIABILITIES		
Notes payable and current maturities of long-term debt	\$ 8.6	\$ 7.8
Accounts payable	109.2	144.4
Operating lease liabilities—current	14.4	15.2
Accrued liabilities	88.9	102.2
Total current liabilities	221.1	269.6
Long-term debt, excluding current portion	1,898.9	1,899.2
Deferred income taxes	222.2	218.0
Operating lease liabilities—noncurrent	34.8	40.2
Other long-term liabilities	94.0	108.6
Total liabilities	2,471.0	2,535.6
Commitments and contingencies		
EQUITY		
Common stock (\$0.01 par); authorized shares 450,000,000; issued shares 136,763,507 and 136,861,382 on June 30, 2020 and December 31, 2019, respectively; outstanding shares 136,045,822 and 136,464,961 on June 30, 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 June 30, 2020 and December 31, 2019	—	—
Additional paid-in capital	1,709.4	1,696.9
Retained earnings	119.1	103.0
Treasury stock, at cost; shares 717,685 and 396,421 on June 30, 2020 and December 31, 2019, respectively	(10.4)	(6.5)
Accumulated other comprehensive loss	(46.7)	(15.4)
Total PQ Group Holdings Inc. equity	1,772.8	1,779.4
Noncontrolling interest	3.4	5.9
Total equity	1,776.2	1,785.3
Total liabilities and equity	\$ 4,247.2	\$ 4,320.9

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

	Six months ended June 30,	
	2020	2019
	(in millions)	
Cash flows from operating activities:		
Net income	\$ 16.8	\$ 34.2
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation	66.7	65.5
Amortization	23.7	25.4
Amortization of deferred financing costs and original issue discount	2.4	2.9
Foreign currency exchange loss	2.5	0.9
Pension and postretirement healthcare benefit expense	—	2.2
Pension and postretirement healthcare benefit funding	(4.2)	(3.6)
Deferred income tax provision	6.0	10.8
Net (gain) loss on asset disposals	8.4	(8.8)
Stock compensation	12.3	8.8
Equity in net income from affiliated companies	(19.8)	(14.4)
Dividends received from affiliated companies	15.1	5.1
Net interest income on swaps designated as net investment hedges	(2.2)	(4.5)
Other, net	(1.2)	(4.3)
Working capital changes that provided (used) cash, excluding the effect of acquisitions and dispositions:		
Receivables	(24.6)	(46.3)
Inventories	(9.3)	(12.2)
Prepays and other current assets	—	2.2
Accounts payable	(15.3)	(0.2)
Accrued liabilities	(15.2)	(3.7)
Net cash provided by operating activities	62.1	60.0
Cash flows from investing activities:		
Purchases of property, plant and equipment	(50.5)	(65.5)
Proceeds from sale of product line	—	26.7
Proceeds from sale of assets	10.3	—
Proceeds from sale of investment	1.8	—
Net interest proceeds on swaps designated as net investment hedges	2.2	4.5
Other, net	—	0.4
Net cash used in investing activities	(36.2)	(33.9)
Cash flows from financing activities:		
Draw down of revolving credit facilities	164.7	74.9
Repayments of revolving credit facilities	(163.9)	(72.2)
Debt issuance costs	(3.0)	—
Repayments of long-term debt	—	(5.0)
Stock repurchases	(3.9)	(1.3)
Proceeds from stock options exercised	0.2	3.5
Other, net	—	(0.2)
Net cash used in financing activities	(5.9)	(0.3)
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(3.3)	(1.5)
Net change in cash, cash equivalents and restricted cash	16.7	24.3
Cash, cash equivalents and restricted cash at beginning of period	73.9	59.7
Cash, cash equivalents and restricted cash at end of period	\$ 90.6	\$ 84.0

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

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	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.	\$ 15.9	\$ 30.6	\$ 16.2	\$ 33.7
Provision for income taxes	16.3	20.3	17.7	22.8
Interest expense, net	22.3	28.5	46.7	57.2
Depreciation and amortization	44.8	45.1	90.5	91.0
EBITDA	99.3	124.5	171.1	204.7
Joint venture depreciation, amortization and interest ^(a)	3.7	3.7	7.5	7.5
Amortization of investment in affiliate step-up ^(b)	1.7	1.7	3.3	4.2
Debt extinguishment costs	—	—	2.5	—
Net (gain) loss on asset disposals ^(c)	(1.0)	(9.7)	8.4	(8.8)
Foreign currency exchange loss (gain) ^(d)	(0.9)	3.6	2.5	0.9
LIFO expense ^(e)	(1.5)	0.1	(1.8)	10.3
Transaction and other related costs ^(f)	0.7	1.0	2.8	1.1
Equity-based compensation	6.4	5.4	12.3	8.8
Restructuring, integration and business optimization expenses ^(g)	3.6	—	5.6	0.7
Defined benefit pension plan (benefit) cost ^(h)	(0.3)	0.6	(0.5)	1.5
Other ⁽ⁱ⁾	1.3	1.6	2.5	2.6
Adjusted EBITDA	113.0	132.5	216.2	233.5
Unallocated corporate expenses	8.6	10.3	19.3	20.3
Segment Adjusted EBITDA	\$ 121.6	\$ 142.8	\$ 235.5	\$ 253.8

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 June 30,					
	2020			2019		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income before non-controlling interest	\$ 32.5	\$ 16.3	\$ 16.2	\$ 51.0	\$ 20.3	\$ 30.7
Less: Net income attributable to non-controlling interest	0.3	—	0.3	0.1	—	0.1
Net income attributable to PQ Group Holdings Inc.	32.2	16.3	15.9	50.9	20.3	30.6
Earnings per share:						
Basic earnings per share			\$ 0.12			\$ 0.23
Diluted earnings per share			\$ 0.12			\$ 0.23
Net income attributable to PQ Group Holdings Inc.	\$ 32.2	\$ 16.3	\$ 15.9	\$ 50.9	\$ 20.3	\$ 30.6
Amortization of investment in affiliate step-up ^(b)	1.7	0.7	1.0	1.7	0.7	1.0
Net loss on asset disposals ^(d)	(1.0)	0.1	(1.1)	(9.7)	(2.3)	(7.4)
Foreign currency exchange loss ^(c)	(0.9)	(1.4)	0.5	3.6	(0.5)	4.1
LIFO expense ^(f)	(1.5)	(0.6)	(0.9)	0.1	(0.1)	0.2
Transaction and other related costs ^(g)	0.7	0.4	0.3	1.0	0.4	0.6
Equity-based compensation	6.4	2.7	3.7	5.4	1.9	3.5
Restructuring, integration and business optimization expenses ^(h)	3.6	1.5	2.1	—	—	—
Defined benefit plan pension (benefit) cost ⁽ⁱ⁾	(0.3)	(0.1)	(0.2)	0.6	0.2	0.4
Other ^(j)	1.3	0.5	0.8	1.6	0.6	1.0
Adjusted Net Income, including non-cash GILTI tax	42.2	20.1	22.1	55.2	21.2	34.0
Impact of non-cash GILTI tax ^(k)	—	(7.9)	7.9	—	(7.5)	7.5
Adjusted Net Income ⁽¹⁾	\$ 42.2	\$ 12.2	\$ 30.0	\$ 55.2	\$ 13.7	\$ 41.5
Adjusted earnings per share:						
Adjusted basic earnings per share			\$ 0.22			\$ 0.31
Adjusted diluted earnings per share			\$ 0.22			\$ 0.31
Weighted average shares outstanding:						
Basic			135,083,126			134,142,552
Diluted			135,671,830			135,323,024

	Six months ended June 30,					
	2020			2019		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income before non-controlling interest	\$ 34.5	\$ 17.7	\$ 16.8	\$ 56.9	\$ 22.8	\$ 34.1
Less: Net income attributable to non-controlling interest	0.6	—	0.6	0.4	—	0.4
Net income attributable to PQ Group Holdings Inc.	33.9	17.7	16.2	56.5	22.8	33.7
Earnings per share:						
Basic earnings per share			\$ 0.12			\$ 0.25
Diluted earnings per share			\$ 0.12			\$ 0.25
Net income attributable to PQ Group Holdings Inc.	\$ 33.9	\$ 17.7	\$ 16.2	\$ 56.5	\$ 22.8	\$ 33.7
Amortization of investment in affiliate step-up ^(b)	3.3	1.3	2.0	4.2	1.5	2.7
Debt extinguishment costs	2.5	1.0	1.5	—	—	—
Net loss on asset disposals ^(c)	8.4	2.4	6.0	(8.8)	(1.9)	(6.9)
Foreign currency exchange loss (gain) ^(d)	2.5	1.0	1.5	0.9	(1.2)	2.1
LIFO expense ^(e)	(1.8)	(0.7)	(1.1)	10.3	3.7	6.6
Transaction and other related costs ^(f)	2.8	1.1	1.7	1.1	0.4	0.7
Equity-based compensation	12.3	4.8	7.5	8.8	3.2	5.6
Restructuring, integration and business optimization expenses ^(g)	5.6	2.2	3.4	0.7	0.2	0.5
Defined benefit plan pension (benefit) cost ^(h)	(0.5)	(0.2)	(0.3)	1.5	0.5	1.0
Other ⁽ⁱ⁾	2.5	1.0	1.5	2.6	0.9	1.7
Adjusted Net Income, including non-cash GILTI tax	71.5	31.6	39.9	77.8	30.1	47.7
Impact of non-cash GILTI tax ⁽²⁾	—	(11.8)	11.8	—	(11.2)	11.2
Adjusted Net Income ⁽¹⁾	<u>\$ 71.5</u>	<u>\$ 19.8</u>	<u>\$ 51.7</u>	<u>\$ 77.8</u>	<u>\$ 18.9</u>	<u>\$ 58.9</u>
Adjusted earnings per share:						
Adjusted basic earnings per share			\$ 0.38			\$ 0.44
Adjusted diluted earnings per share			\$ 0.38			\$ 0.44
Weighted average shares outstanding:						
Basic			135,278,764			134,044,972
Diluted			136,079,540			135,107,007

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 June 30, 2020			Six months ended June 30,		
	2020	2019	% Change	2020	2019	% Change
Sales:						
Refining Services	\$ 90.4	\$ 117.3	(22.9)%	\$ 191.1	\$ 223.1	(14.3)%
Silica Catalysts	25.2	20.9	20.6 %	50.1	36.7	36.5 %
Performance Materials	104.3	118.9	(12.3)%	169.8	180.0	(5.7)%
Performance Chemicals	142.6	177.8	(19.8)%	316.9	358.3	(11.6)%
Eliminations	(3.0)	(3.2)		(6.8)	(7.2)	
Total sales	\$ 359.5	\$ 431.7	(16.7)%	\$ 721.1	\$ 790.9	(8.8)%
Zeolyst joint venture sales	\$ 41.0	\$ 39.1	4.9 %	\$ 73.0	\$ 68.6	6.4 %
Adjusted EBITDA:						
Refining Services	\$ 35.0	\$ 42.8	(18.2)%	\$ 72.2	\$ 82.6	(12.6)%
Catalysts	25.3	29.6	(14.5)%	48.0	47.7	0.6 %
Performance Materials	27.3	29.2	(6.5)%	40.8	39.7	2.8 %
Performance Chemicals	34.0	41.2	(17.5)%	74.5	83.8	(11.1)%
Total Segment Adjusted EBITDA	\$ 121.6	\$ 142.8	(14.8)%	\$ 235.5	\$ 253.8	(7.2)%
Corporate	(8.6)	(10.3)	16.5 %	(19.3)	(20.3)	4.9 %
Total Adjusted EBITDA	\$ 113.0	\$ 132.5	(14.7)%	\$ 216.2	\$ 233.5	(7.4)%
Adjusted EBITDA Margin:						
Refining Services	38.7 %	36.5 %		37.8 %	37.0 %	
Catalysts ⁽¹⁾	38.2 %	49.4 %		39.0 %	45.3 %	
Performance Materials	26.2 %	24.6 %		24.0 %	22.1 %	
Performance Chemicals	23.8 %	23.1 %		23.5 %	23.4 %	
Total Adjusted EBITDA Margin⁽¹⁾	28.2 %	28.1 %		27.2 %	27.2 %	

⁽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 and six months ended June 30, 2020

	Three months ended June 30, 2020			Three months ended June 30, 2019		% Change
	As Reported	FX	Constant Currency	As Reported		
(in millions, except percentages)						
Sales:						
Refining Services	\$ 90.4	\$ —	\$ 90.4	\$ 117.3		(22.9)%
Silica Catalysts	25.2	0.7	25.9	20.9		23.9 %
Performance Materials	104.3	1.5	105.8	118.9		(11.0)%
Performance Chemicals	142.6	7.9	150.5	177.8		(15.4)%
Eliminations	(3.0)	(0.1)	(3.1)	(3.2)		3.1 %
Total sales	<u>\$ 359.5</u>	<u>\$ 10.0</u>	<u>\$ 369.5</u>	<u>\$ 431.7</u>		(14.4)%
Zeolyst joint venture sales	\$ 41.0	\$ —	\$ 41.0	\$ 39.1		4.9 %
Adjusted EBITDA:						
Refining Services	\$ 35.0	\$ —	\$ 35.0	\$ 42.8		(18.2)%
Catalysts	25.3	0.3	25.6	29.6		(13.5)%
Performance Materials	27.3	0.4	27.7	29.2		(5.1)%
Performance Chemicals	34.0	2.1	36.1	41.2		(12.4)%
Total Segment Adjusted EBITDA	<u>\$ 121.6</u>	<u>\$ 2.8</u>	<u>\$ 124.4</u>	<u>\$ 142.8</u>		(12.9)%
Corporate	(8.6)	—	(8.6)	(10.3)		16.5 %
Total Adjusted EBITDA	<u>\$ 113.0</u>	<u>\$ 2.8</u>	<u>\$ 115.8</u>	<u>\$ 132.5</u>		(12.6)%

	Six months ended June 30, 2020			Six months ended June 30, 2019		% Change
	As Reported	FX	Constant Currency	As Reported		
(in millions, except percentages)						
Sales:						
Refining Services	\$ 191.1	\$ —	\$ 191.1	\$ 223.1		(14.3)%
Silica Catalysts	50.1	0.9	51.0	36.7		39.0 %
Performance Materials	169.8	2.9	172.7	180.0		(4.1)%
Performance Chemicals	316.9	12.1	329.0	358.3		(8.2)%
Eliminations	(6.8)	(0.2)	(7.0)	(7.2)		2.8 %
Total sales	<u>\$ 721.1</u>	<u>\$ 15.7</u>	<u>\$ 736.8</u>	<u>\$ 790.9</u>		<u>(6.8)%</u>
Zeolyst joint venture sales	\$ 73.0	\$ —	\$ 73.0	\$ 68.6		6.4 %
Adjusted EBITDA:						
Refining Services	\$ 72.2	\$ —	\$ 72.2	\$ 82.6		(12.6)%
Catalysts	48.0	0.4	48.4	47.7		1.5 %
Performance Materials	40.8	0.5	41.3	39.7		4.0 %
Performance Chemicals	74.5	3.1	77.6	83.8		(7.4)%
Total Segment Adjusted EBITDA	<u>\$ 235.5</u>	<u>\$ 4.0</u>	<u>\$ 239.5</u>	<u>\$ 253.8</u>		<u>(5.6)%</u>
Corporate	(19.3)	—	(19.3)	(20.3)		4.9 %
Total Adjusted EBITDA	<u>\$ 216.2</u>	<u>\$ 4.0</u>	<u>\$ 220.2</u>	<u>\$ 233.5</u>		<u>(5.7)%</u>

Appendix Table A-5: Adjusted Free Cash Flow

	Three months ended June 30,		Six months ended June 30,	
	2020	2019	2020	2019
	(in millions)			
Net cash provided by operating activities	\$ 57.6	\$ 33.2	\$ 62.1	\$ 60.0
Less:				
Purchases of property, plant and equipment ⁽¹⁾	(22.4)	(31.9)	(50.5)	(65.5)
Free cash flow	<u>35.2</u>	<u>1.3</u>	<u>11.6</u>	<u>(5.5)</u>
Adjustments to free cash flow:				
Proceeds from sale of assets	7.9	—	10.3	—
Net interest proceeds on currency swaps	0.4	0.6	2.2	4.5
Adjusted free cash flow ⁽²⁾	<u>\$ 43.5</u>	<u>\$ 1.9</u>	<u>\$ 24.1</u>	<u>\$ (1.0)</u>
Net cash used in investing activities ⁽³⁾	\$ (14.1)	\$ (4.6)	\$ (36.2)	\$ (33.9)
Net cash used in financing activities	\$ (64.1)	\$ 2.3	\$ (5.9)	\$ (0.3)

(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.