

**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): **November 6, 2018**

PQ Group Holdings Inc.

Delaware
(State or other jurisdiction of
incorporation or organization)

001-38221
(Commission
File Number)

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))

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 November 6, 2018, PQ Group Holdings Inc. issued a press release announcing the reporting of its financial results for the quarter ended September 30, 2018. 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 September 30, 2018

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: November 6, 2018 By /s/ MICHAEL CREWS

Michael Crews

Executive Vice President and Chief Financial Officer

EXHIBIT INDEX

Exhibit No.	Description
99.1	Press release issued by PQ Group Holdings Inc. announcing financial results for the quarter ended September 30, 2018

**PQ Group Holdings Reports Third Quarter 2018; Updates 2018 Guidance
Raising adjusted free cash flow outlook to \$125 million to \$140 million, a yield of ~6%**

- Sales up 9.0% to \$427.2 million; Net income of \$14.2 million with Diluted EPS of \$0.11
- Adjusted Net Income of \$35.4 million with Adjusted Diluted EPS of \$0.26; Adjusted EBITDA of \$118.1 million
- Net cash provided by operating activities of \$115.9 million and quarterly adjusted free cash flow of \$91.0 million, leading to \$80 million of debt repayment
- 2018 outlook: Raising adjusted free cash flow expectation to \$125 million to \$140 million, a yield of ~6%; on track for additional debt paydown by year-end

MALVERN, PA, November 6, 2018 -- PQ Group Holdings Inc. (NYSE:PQG) reported results for the three months ended September 30, 2018. Sales of \$427.2 million increased 9.0% from the same period in 2017, driven by higher sales in both business segments. Net income was \$14.2 million with diluted EPS of \$0.11 as compared to a net loss of \$3.4 million with diluted loss per share of \$0.03 for the same period in 2017. Net cash provided by operating activities was \$115.9 million for the three months ended September 30, 2018, as compared to \$88.0 million for the same period in 2017.

Adjusted Net Income grew 216.1% to \$35.4 million with diluted adjusted EPS of \$0.26, from Adjusted Net Income of \$11.2 million with diluted adjusted EPS of \$0.11 for the same period in 2017 driven largely by lower interest expense. Adjusted EBITDA was \$118.1 million, a 1.5% decrease largely attributable to the Performance Materials & Chemicals business segment more than offsetting improved performance in the Environmental Catalysts & Services business segment. Adjusted free cash flow generation in the quarter increased by 55.8% to \$91.0 million from the same period in 2017, largely driven by lower interest costs attributed to reduced debt levels.

“While we delivered solid top line growth this quarter driven by overall healthy demand, our financial results were impacted by unfavorable sales mix and higher operating expenses in Performance Materials,” commented Belgacem Chariag, PQ President and Chief Executive Officer. “Despite this result, we generated strong free cash flow during the quarter and our free cash flow outlook for the year has improved. Our debt repayment plans for this year are on track and we remain committed to our deleveraging goals.”

Chariag added, “I am very excited by PQ’s high niche specialty businesses and the potential for profitable growth. Since joining the Company as CEO in August, the team and I have been focused squarely on the three key drivers of shareholder value - growth, effective capital allocation and free cash flow.”

The financial results and outlook include non-GAAP financial measures. These non-GAAP measures are more fully described and are reconciled from the respective measures determined under GAAP in “Presentation of Non-GAAP Financial Measures” and the attached appendix tables.

Environmental Catalysts & Services Segment Results (“EC&S”)

Sales of \$139.7 million increased 21.0% from the same period in 2017 primarily due to higher demand for Refining Services regeneration services and virgin sulfuric acid and Silica Catalyst polyolefin catalysts. Net sales from the Zeolyst Joint Venture decreased by 14.2% to \$32.3 million, on lower specialty catalysts to petrochemicals. Adjusted EBITDA of \$65.3 million was up 5.5% primarily driven by growth in the refining services product group. Adjusted EBITDA margin of 38.0% was down from the same period in 2017 due to higher costs related to inventory depletion and the impact of higher sulfur pass-through costs.

Performance Materials & Chemicals Segment Results (“PM&C”)

Sales of \$288.3 million increased 4.0% from the same period in 2017 driven by North America highway demand. Adjusted EBITDA of \$63.1 million decreased 4.2% and Adjusted EBITDA margin of 21.9% was lower on higher Performance Materials manufacturing costs, including freight, and weaker highway sales in Europe.

Cash Flows and Balance Sheet

For the nine months ended September 30, 2018, cash flows from operating activities increased to \$166.0 million, as compared to \$109.8 million for the same period in 2017. This increase was due largely to lower interest expense and improved business performance. Due to seasonality, the Company’s strongest cash flows are typically in the second half of the year. At September 30, 2018, the Company had cash and cash equivalents of \$56.7 million and total gross debt outstanding of \$2,205.9 million.

2018 Financial Outlook

The Company updates its 2018 guidance as below:

- Sales of \$1,580 million to \$1,600 million, up from \$1,545 million to \$1,575 million
- Adjusted EBITDA of \$460 million to \$465 million, down from \$470 million to \$490 million
- Depreciation and Amortization of \$185 million to \$190 million, unchanged; excludes \$12 million to \$14 million for 50% share in Zeolyst Joint Venture
- Interest expense of \$115 million to \$120 million, down from \$120 million to \$130 million
- Capital expenditures of \$140 million to \$145 million, down from \$150 million to \$155 million
- Effective tax rate of approximately 25% - 30%, excluding the non-cash impact of tax reform, down from 30%
- Adjusted free cash flow of \$125 million to \$140 million, up from \$120 million to \$140 million, a yield of ~6% (defined as the mid-point of the adjusted free cash flow 2018 guidance divided by the Company’s market capitalization as of November 2, 2018)¹

¹ Prior free cash flow guidance included expected net interest proceeds on currency swaps, notwithstanding that such proceeds are reflected in net cash used in investing activities rather than net cash provided by operating activities.

Conference Call and Webcast Details

On Tuesday, November 6, 2018, 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 4583942.

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:

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About PQ Group Holdings Inc.

PQ Group Holdings Inc. is an integrated global provider of specialty catalysts, specialty materials and chemicals, and services. Our environmental catalysts and services business is a leading global innovator and producer of catalysts for the refinery, emissions control, and petrochemical industries and is also a leading provider of catalyst recycling services to the North American refining industry. Our performance materials and chemicals business is a silicates and specialty materials producer with leading supply positions for the majority of our products sold in North America, Europe, South America, Australia and Asia (excluding China) serving diverse and growing end uses such as personal and industrial cleaning products, fuel efficient tires, surface coatings, and food and beverage products.

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 free cash flow yield, Adjusted net income, Adjusted earnings per share and Adjusted diluted earnings per share—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 free cash flow yield, Adjusted net income, Adjusted earnings per share and Adjusted diluted earnings per share 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 earnings per share and Adjusted diluted earnings per share are reconciled from the respective measures under GAAP in the appendix below.

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 total net sales represents 50% of the total net 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 operations 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 total net 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 results of operations, financial condition, liquidity, prospects, growth, strategies, product and service offerings and 2018 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, 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 OPERATIONS

	Three months ended September 30,			Nine months ended September 30,		
	2018	2017	% Change	2018	2017	% Change
	<i>(in millions, except percentages, share and per share amounts)</i>					
Sales	\$ 427.2	\$ 391.8	9.0 %	\$ 1,228.1	\$ 1,114.0	10.2 %
Cost of goods sold	319.7	289.3	10.5 %	934.1	821.3	13.7 %
Gross profit	107.5	102.5	4.9 %	294.0	292.7	0.4 %
Selling, general and administrative expenses	42.1	36.3	16.0 %	126.2	106.4	18.6 %
Other operating expense, net	16.5	19.8	(16.7)%	41.7	47.2	(11.7)%
Operating income	48.9	46.4	5.4 %	126.1	139.1	(9.3)%
Equity in net (income) from affiliated companies	(5.6)	(10.3)	(45.6)%	(31.1)	(24.9)	24.9 %
Interest expense, net	28.2	49.1	(42.6)%	84.6	144.0	(41.3)%
Debt extinguishment costs	0.9	0.5	88.3 %	6.7	0.5	NM
Other expense, net	2.5	5.0	(50.0)%	13.1	21.2	(38.2)%
Income (loss) before income taxes and noncontrolling interest	22.9	2.1	NM	52.8	(1.7)	NM
Provision for income taxes ⁽¹⁾	8.5	5.2	NM	21.6	5.3	NM
Effective tax rate	37.0%	239.9%		40.9%	(304.2)%	
Net income (loss)	14.4	(3.1)	NM	31.2	(7.0)	NM
Less: Net income attributable to the noncontrolling interest	0.2	0.3	NM	1.0	0.4	NM
Net income (loss) attributable to PQ Group Holdings Inc.	\$ 14.2	\$ (3.4)	NM	\$ 30.2	\$ (7.4)	NM
Net earnings (loss) per share:						
Basic earnings (loss) per share	\$ 0.11	\$ (0.03)		\$ 0.23	\$ (0.07)	
Diluted earnings (loss) per share	\$ 0.11	\$ (0.03)		\$ 0.22	\$ (0.07)	
Weighted average shares outstanding:						
Basic	133,336,352	104,096,837		133,237,653	104,020,180	
Diluted	134,576,162	104,096,837		134,223,628	104,020,180	

⁽¹⁾ Net of a \$6.2 million and \$9.8 million provision for GILTI for the three and nine months ended September 30, 2018, respectively, and a \$2.5 million and \$1.4 million provisional benefit adjustment for the impact of the U.S. Tax Cuts and Job Act of 2017 for the three and nine months ended September 30, 2018, respectively.

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

	September 30, 2018	December 31, 2017
ASSETS		
Cash and cash equivalents	\$ 56.7	\$ 66.2
Receivables, net	230.4	193.5
Inventories	249.3	262.4
Prepaid and other current assets	39.2	26.9
Total current assets	575.6	549.0
Investments in affiliated companies	467.6	469.3
Property, plant and equipment, net	1,204.9	1,230.4
Goodwill	1,263.0	1,306.0
Other intangible assets, net	747.4	786.1
Other long-term assets	98.1	74.7
Total assets	\$ 4,356.6	\$ 4,415.5
LIABILITIES		
Notes payable and current maturities of long-term debt	\$ 21.4	\$ 45.2
Accounts payable	129.2	149.3
Accrued liabilities	91.5	93.9
Total current liabilities	242.1	288.4
Long-term debt, excluding current portion	2,147.1	2,185.3
Deferred income taxes	194.7	189.3
Other long-term liabilities	110.2	120.6
Total liabilities	2,694.1	2,783.6
Commitments and contingencies		
EQUITY		
Common stock (\$0.01 par); authorized shares 450,000,000; issued shares 135,249,216 and 135,244,379 on September 30, 2018 and December 31, 2017, respectively; outstanding shares 135,206,108 and 135,244,379 on September 30, 2018 and December 31, 2017, respectively	1.4	1.4
Preferred stock (\$0.01 par); authorized shares 50,000,000; no shares issued or outstanding on September 30, 2018 and December 31, 2017	—	—
Additional paid-in capital	1,667.0	1,655.1
Accumulated deficit	(2.6)	(32.8)
Treasury stock, at cost; shares 43,108 and 0 on September 30, 2018 and December 31, 2017, respectively	(0.8)	—
Accumulated other comprehensive income (loss)	(7.6)	4.3
Total PQ Group Holdings Inc. equity	1,657.4	1,628.0
Noncontrolling interest	5.1	3.9
Total equity	1,662.5	1,631.9
Total liabilities and equity	\$ 4,356.6	\$ 4,415.5

PQ GROUP HOLDINGS INC. AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(in millions)

	Nine months ended September 30,	
	2018	2017
Cash flows from operating activities:		
Net income (loss)	\$ 31.2	\$ (7.0)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:		
Depreciation	99.5	90.0
Amortization	39.8	39.1
Acquisition accounting valuation adjustments on inventory sold	1.6	0.9
Amortization of deferred financing costs and original issue discount	4.6	6.6
Debt extinguishment costs	4.6	0.3
Foreign currency exchange loss	15.3	21.6
Pension and postretirement healthcare benefit expense	0.3	2.6
Pension and postretirement healthcare benefit funding	(6.4)	(7.5)
Deferred income tax provision (benefit)	1.5	(12.4)
Net loss on asset disposals	11.1	6.4
Stock compensation	11.9	3.9
Equity in net (income) from affiliated companies	(31.1)	(24.9)
Dividends received from affiliated companies	35.9	19.1
Net interest income on swaps designated as net investment hedges	(4.3)	—
Other, net	(6.4)	(3.4)
Working capital changes that provided (used) cash, excluding the effect of business combinations:		
Receivables	(43.1)	(28.9)
Inventories	8.8	4.9
Prepays and other current assets	(1.6)	(6.0)
Accounts payable	(7.6)	(9.0)
Accrued liabilities	0.4	13.5
Net cash provided by operating activities	166.0	109.8
Cash flows from investing activities:		
Purchases of property, plant and equipment	(95.3)	(90.2)
Investment in affiliated companies	(5.0)	(9.0)
Loan receivable under the New Markets Tax Credit Arrangement	—	(6.2)
Business combinations, net of cash acquired	(1.0)	(41.6)
Net interest proceeds on swaps designated as net investment hedges	4.3	—
Other, net	1.2	0.5
Net cash used in investing activities	(95.8)	(146.5)
Cash flows from financing activities:		
Draw down of revolver	139.6	302.8
Repayments of revolver	(163.1)	(270.1)
Issuance of long-term debt	1,267.0	8.8
Debt issuance costs	(6.2)	(1.2)
Repayments of long-term debt	(1,313.8)	(10.3)
Distributions to noncontrolling interests	(0.5)	(0.8)
Repurchase of common shares	(0.8)	—
Net cash (used in) provided by financing activities	(77.8)	29.2
Effect of exchange rate changes on cash, cash equivalents and restricted cash	(1.6)	(6.5)
Net change in cash, cash equivalents and restricted cash	(9.2)	(14.0)
Cash, cash equivalents and restricted cash at beginning of period	67.2	85.1
Cash, cash equivalents and restricted cash at end of period	\$ 58.0	\$ 71.1

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

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
(in millions)				
Reconciliation of net income (loss) attributable to PQ Group Holdings Inc. to Segment Adjusted EBITDA				
Net income (loss) attributable to PQ Group Holdings Inc.	\$ 14.2	\$ (3.4)	\$ 30.2	\$ (7.4)
Provision for income taxes	8.5	5.2	21.6	5.3
Interest expense, net	28.2	49.1	84.6	144.0
Depreciation and amortization	43.8	45.9	139.3	129.1
EBITDA	94.7	96.8	275.7	271.0
Joint venture depreciation, amortization and interest ^(a)	3.3	2.6	9.2	8.1
Amortization of investment in affiliate step-up ^(b)	1.7	1.7	5.0	6.9
Amortization of inventory step-up ^(c)	—	—	1.6	0.9
Debt extinguishment costs	0.9	0.5	6.7	0.5
Net loss on asset disposals ^(d)	5.2	3.5	11.1	6.4
Foreign currency exchange loss ^(c)	3.5	5.3	15.3	21.6
LIFO expense ^(f)	0.9	0.8	5.9	3.2
Management advisory fees ^(g)	—	1.3	—	3.8
Transaction and other related costs ^(h)	0.2	1.0	0.9	5.3
Equity-based and other non-cash compensation	4.3	1.0	11.9	3.9
Restructuring, integration and business optimization expenses ⁽ⁱ⁾	2.2	5.0	5.7	8.0
Defined benefit pension plan cost ^(j)	0.1	0.8	0.3	2.2
Other ^(k)	1.1	(0.4)	5.6	2.1
Adjusted EBITDA	118.1	119.9	354.9	343.9
Unallocated corporate expenses	10.3	7.9	27.3	23.5
Total Segment Adjusted EBITDA	\$ 128.4	\$ 127.8	\$ 382.2	\$ 367.4

Descriptions to PQ Non-GAAP Reconciliations

- (a) We use Adjusted EBITDA, Adjusted Net Income, and Adjusted Basic and Diluted EPS as performance measures to evaluate our financial results. Because our Environmental Catalysts and Services segment includes our 50% interest in our Zeolyst Joint Venture, we include an adjustment for our 50% proportionate share of depreciation, amortization and interest expense of our Zeolyst Joint Venture.
- (b) Represents the amortization of the fair value adjustments associated with the equity affiliate investment in our 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 our Zeolyst Joint Venture. Amortization is primarily related to the fair value adjustments associated with inventory, fixed assets and intangible assets, including customer relationships and technical know-how.
- (c) As a result of the Sovitec acquisition and the Business Combination, there was a step-up in the fair value of inventory, which is amortized through cost of goods sold in the statement of operations.
- (d) We do not have a history of significant asset disposals. However, 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.

- (e) Reflects the exclusion of the negative or positive transaction gains and losses of foreign currency in the income statement primarily related to the Euro denominated term loan (which was settled as part of the February 2018 term loan refinancing) and the non-permanent intercompany debt denominated in local currency translated to U.S. dollars.
- (f) 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.
- (g) Reflects consulting fees paid to CCMP and affiliates of INEOS for consulting services that include certain financial advisory and management services. These payments ceased upon the closing of our initial public offering.
- (h) Relates to certain transaction costs described in our condensed consolidated financial statements as well as other costs related to several transactions that are completed, pending or abandoned and that we believe are not representative of our ongoing business operations.
- (i) Includes the impact of restructuring, integration and business optimization expenses which are incremental costs that are not representative of our ongoing business operations.
- (j) Represents adjustments for defined benefit pension plan costs in our statement of operations. 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 expenses as core to our ongoing business operations.
- (k) 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 September 30,					
	2018			2017		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income (loss) before non-controlling interest	\$ 22.9	\$ 8.5	\$ 14.4	\$ 2.1	\$ 5.2	\$ (3.1)
Less: Net income attributable to non-controlling interest			0.2			0.3
Net income (loss) attributable to PQ Group Holdings Inc.			14.2			(3.4)
Amortization of investment in affiliate step-up ^(b)	1.7	0.8	0.9	1.7	0.7	1.0
Debt extinguishment costs	0.9	0.7	0.2	0.5	0.2	0.3
Net loss on asset disposals ^(d)	5.2	2.3	2.9	3.5	1.4	2.1
Foreign currency exchange loss ^(c)	3.5	(0.5)	4.0	5.3	0.1	5.2
LIFO expense ^(f)	0.9	0.6	0.3	0.8	0.3	0.5
Management advisory fees ^(g)	—	—	—	1.3	0.5	0.8
Transaction and other related costs ^(h)	0.2	0.1	0.1	1.0	0.4	0.6
Equity-based and other non-cash compensation	4.3	2.1	2.2	1.0	0.3	0.7
Restructuring, integration and business optimization expenses ⁽ⁱ⁾	2.2	1.0	1.2	5.0	2.1	2.9
Defined benefit pension plan cost ^(j)	0.1	—	0.1	0.8	0.3	0.5
Other ^(k)	1.1	0.7	0.4	(0.4)	(0.4)	—
Adjusted Net Income, including non-cash GILTI tax			26.5			11.2
Impact of non-cash GILTI tax ⁽²⁾		11.4	11.4		—	—
Impact of tax reform ⁽³⁾		(2.5)	(2.5)		—	—
Adjusted Net Income ⁽¹⁾			<u>\$ 35.4</u>			<u>\$ 11.2</u>
Adjusted Net Income per share:						
Basic income per share			\$ 0.27			\$ 0.11
Diluted income per share			\$ 0.26			\$ 0.11
Weighted average shares outstanding:						
Basic			133,336,352			104,096,837
Diluted			134,576,162			104,096,837

	Nine months ended September 30,					
	2018			2017		
	Pre-tax	Tax expense (benefit)	After-tax	Pre-tax	Tax expense (benefit)	After-tax
	(in millions)					
Net income (loss) before non-controlling interest	\$ 52.8	\$ 21.6	\$ 31.2	\$ (1.7)	\$ 5.3	\$ (7.0)
Less: Net income attributable to non-controlling interest			1.0			0.4
Net income (loss) attributable to PQ Group Holdings Inc.			30.2			(7.4)
Amortization of investment in affiliate step-up ^(b)	5.0	1.9	3.1	6.9	2.9	4.0
Amortization of inventory step-up ^(c)	1.6	0.6	1.0	0.9	0.4	0.5
Debt extinguishment costs	6.7	2.4	4.3	0.5	0.2	0.3
Net loss on asset disposals ^(d)	11.1	4.2	6.9	6.4	2.7	3.7
Foreign currency exchange loss ^(e)	15.3	3.3	12.0	21.6	6.7	14.9
LIFO expense ^(f)	5.9	2.3	3.6	3.2	1.3	1.9
Management advisory fees ^(g)	—	—	—	3.8	1.6	2.2
Transaction and other related costs ^(h)	0.9	0.3	0.6	5.3	2.2	3.1
Equity-based and other non-cash compensation	11.9	4.6	7.3	3.9	1.7	2.2
Restructuring, integration and business optimization expenses ⁽ⁱ⁾	5.7	2.2	3.5	8.0	3.4	4.6
Defined benefit pension plan cost ^(j)	0.3	0.1	0.2	2.2	0.9	1.3
Other ^(k)	5.6	2.3	3.3	2.1	0.9	1.2
Adjusted Net Income, including non-cash GILTI tax			76.0			32.5
Impact of non-cash GILTI tax ⁽²⁾		19.0	19.0		—	—
Impact of tax reform ⁽³⁾		(1.5)	(1.5)		—	—
Adjusted Net Income ⁽¹⁾			<u>\$ 93.5</u>			<u>\$ 32.5</u>
Adjusted Net Income per share:						
Basic income per share			\$ 0.70			\$ 0.31
Diluted income per share			\$ 0.70			\$ 0.31
Weighted average shares outstanding:						
Basic			133,237,653			104,020,180
Diluted			134,223,628			104,020,180

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 (loss) 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 (loss) 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 associated with the Global Intangible Low Taxed Income ("GILTI") provisions of the Tax Cuts and Jobs Act of 2017 ("TCJA"). Beginning 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 an 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.
- (3) Represents the provisional adjustment for the impact of the TCJA recorded in net income.

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

	Three months ended September 30,			Nine months ended September 30,		
	2018	2017	% Change	2018	2017	% Change
(in millions, except percentages)						
Sales:						
EC&S	\$ 139.7	\$ 115.5	21.0 %	\$ 386.4	\$ 350.8	10.1 %
PM&C	288.3	277.1	4.0 %	844.3	765.9	10.2 %
Corporate	(0.8)	(0.8)	— %	(2.6)	(2.7)	(3.7)%
Total sales	<u>\$ 427.2</u>	<u>\$ 391.8</u>	<u>9.0 %</u>	<u>\$ 1,228.1</u>	<u>\$ 1,114.0</u>	<u>10.2 %</u>
Zeolyst Joint Venture Sales	\$ 32.3	\$ 37.6	(14.2)%	\$ 120.2	\$ 101.0	19.0 %
Adjusted EBITDA:						
EC&S	\$ 65.3	\$ 61.9	5.5 %	\$ 188.6	\$ 182.6	3.3 %
PM&C	63.1	65.9	(4.2)%	193.6	184.8	4.8 %
Corporate	(10.3)	(7.9)	30.4 %	(27.3)	(23.5)	16.2 %
Total Adjusted EBITDA	<u>\$ 118.1</u>	<u>\$ 119.9</u>	<u>(1.5)%</u>	<u>\$ 354.9</u>	<u>\$ 343.9</u>	<u>3.2 %</u>
Adjusted EBITDA Margin:						
EC&S ⁽¹⁾	38.0%	40.4%		37.2%	40.4%	
PM&C	21.9%	23.8%		22.9%	24.1%	
Total Adjusted EBITDA Margin⁽¹⁾	<u>25.7%</u>	<u>27.9%</u>		<u>26.3%</u>	<u>28.3%</u>	

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

Appendix Table A-4: Adjusted Free Cash Flow

	Three months ended September 30,		Nine months ended September 30,	
	2018	2017	2018	2017
	(in millions)			
Net cash provided by operating activities	\$ 115.9	\$ 88.0	\$ 166.0	\$ 109.8
Less:				
Purchases of property, plant and equipment ⁽¹⁾	(29.2)	(29.6)	(95.3)	(90.2)
Free cash flow	<u>86.7</u>	<u>58.4</u>	<u>70.7</u>	<u>19.6</u>
Adjustments to free cash flow				
Net interest proceeds on currency swaps	4.3	—	4.3	—
Adjusted free cash flow ⁽²⁾	<u>\$ 91.0</u>	<u>\$ 58.4</u>	<u>\$ 75.0</u>	<u>\$ 19.6</u>
Net cash used in investing activities ⁽³⁾	\$ (29.5)	\$ (33.6)	\$ (95.8)	\$ (146.5)
Net cash (used in) provided by financing activities	\$ (82.5)	\$ (37.6)	\$ (77.8)	\$ 29.2

⁽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 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 condensed consolidated statements of cash flows.

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