

**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): **February 21, 2019**

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 February 21, 2019, PQ Group Holdings Inc. issued a press release announcing the reporting of its financial results for the quarter and year ended December 31, 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 and year ended December 31, 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: February 21, 2019 By /s/ MICHAEL CREWS

Michael Crews

Executive Vice President and Chief Financial Officer

EXHIBIT INDEX

| <u>Exhibit No.</u> | <u>Description</u> |
|--------------------|--|
| 99.1 | Press release issued by PQ Group Holdings Inc. announcing financial results for the quarter and year ended December 31, 2018 |

**PQ Group Holdings Reports Fourth Quarter and Full Year 2018 Results;
9% Sales growth, 50% operating cash flow improvement and ~\$135 million of debt repayment for the year**

- Sales increased 6% to \$380.1 million for the fourth quarter and 9% to \$1,608.2 million for the year;
- Net income of \$28.2 million for the fourth quarter and \$58.3 million for the year;
- Adjusted EBITDA of \$109.1 million for the fourth quarter and \$464.0 million for the year;
- Operating cash flow higher by 50% to \$248.6 million for the year; Adjusted free cash flow up \$109.4 million for the year leading to approximately \$135 million debt reduction for the year;
- 2019 Guidance: Sales of \$1,640 million to \$1,670 million; Adjusted EBITDA of \$470 million to \$485 million; Adjusted free cash flow of \$125 million to \$145 million; and
- Announcing realignment into four distinct business units including Catalysts, Performance Chemicals, Performance Materials, and Refining Services

MALVERN, PA, February 21, 2019 -- PQ Group Holdings Inc. (NYSE:PQG) (“PQ” or the “Company”) reported results for the fourth quarter and year ended December 31, 2018. For the fourth quarter, sales of \$380.1 million were up 6% from the fourth quarter of 2017. Net income was \$28.2 million or \$0.21 diluted EPS and Adjusted net income was \$23.2 million or \$0.17 Adjusted diluted EPS. Adjusted EBITDA was \$109.1 million. For the year, sales were \$1,608.2 million, an increase of 9% over 2017. Net income was \$58.3 million or \$0.43 diluted EPS. Adjusted net income was \$116.6 million or \$0.87 Adjusted diluted EPS. Adjusted EBITDA was \$464.0 million.

“In the fourth quarter, we delivered on both pricing and volume growth plans that drove a solid finish to the year. We generated strong operating and adjusted free cash flow for 2018 that was all allocated to debt reduction, achieving meaningful progress towards our deleveraging target,” commented Belgacem Chariag, PQ President and Chief Executive Officer. “Despite more modest macroeconomic trends in 2019, we expect growth in all our product groups driven by continued underlying secular demand.”

Chariag also added, “Since our last quarter earnings call, we advanced our strategic review to make our business portfolio simpler and stronger. As a first step in this process, we are delayering our business structure effective March 1 to empower our four strong business units, creating an environment of focus and accountability to drive additional efficiencies.”

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 (“EC&S”) Segment Results

For the fourth quarter ended December 31, 2018, sales of \$141.3 million rose 15.0% versus the same period in 2017, driven by higher demand for regeneration services and virgin sulfuric acid in Refining Services as well as polyolefin catalysts in Silica Catalysts. Net sales from the Zeolyst Joint Venture decreased by 14.7% to \$36.5 million, largely on expected lower hydrocracking catalyst volumes due to timing of customer demand. Adjusted EBITDA of \$69.0 million was up 13.1%, benefiting from the higher Refining Services operating results coupled with a gain related to a Hurricane Harvey insurance recovery.

For the year ended December 31, 2018, sales of \$527.7 million grew 11.4% from 2017 largely driven by higher sales demand in Refining Services and polyolefin catalysts offsetting lower chemical catalyst volumes in Silica Catalysts. Net sales from the Zeolyst Joint Venture increased 9.0% to \$156.7 million due to higher demand for hydrocracking and emission control catalysts. Adjusted EBITDA of \$257.6 million was up 5.7% from 2017, largely driven by the operating performance in Refining Services.

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

For the quarter ended December 31, 2018, sales of \$239.5 million improved 1.5% versus the same period in 2017. This was largely driven by higher sales in the Performance Materials North America highway safety product line, offsetting lower demand in Performance Chemicals and unfavorable currency. Adjusted EBITDA of \$49.8 million decreased 10.2% from the same period in 2017 largely as a result of higher costs in Performance Materials.

For the year ended December 31, 2018, sales of \$1,083.8 million rose 8.2% and Adjusted EBITDA of \$243.4 million was up 1.3% from 2017 driven by demand growth in the Performance Materials North America highway safety product line, including ThermoDrop®, and higher Performance Chemicals sodium silicates and specialty silicas sales.

Cash Flows and Balance Sheet

For the year ended December 31, 2018, the Company had cash flows from operating activities of \$248.6 million, compared to \$165.2 million for the year ended December 31, 2017. This increase was primarily driven by lower cash interest of \$65.1 million and improved operating performance.

At December 31, 2018, the Company had cash and cash equivalents of \$57.9 million and total debt outstanding of \$2,148.4 million. During the year ended December 31, 2018, the Company repaid approximately \$135 million in debt, including \$109.5 million of its term loan facility.

2019 Financial Outlook

The Company provides 2019 guidance as below:

- Sales of \$1,640 million to \$1,670 million
- Adjusted EBITDA of \$470 million to \$485 million
- Adjusted diluted EPS of \$0.75 to \$0.93
- Adjusted free cash flow of \$125 million to \$145 million

Conference Call and Webcast Details

On Thursday, February 21, 2019, PQ management will release its fourth quarter and full year 2018 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>.

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About PQ Group Holdings Inc.

PQ Group Holdings Inc. is an integrated, global provider of specialty catalysts, 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 net income, Adjusted EPS and Adjusted diluted EPS—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 and Adjusted diluted EPS 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 and Adjusted diluted EPS 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 2019 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
CONSOLIDATED STATEMENTS OF OPERATIONS**

| | Three months ended December 31, | | | Years ended December 31, | | |
|---|--|-------------|-------------|-----------------------------|-------------|-------------|
| | 2018 | 2017 | % Change | 2018 | 2017 | % Change |
| | (in millions, except percentages, share and per share amounts) | | | | | |
| Sales | \$ 380.1 | \$ 358.1 | 6.1 % | \$ 1,608.2 | \$ 1,472.1 | 9.2 % |
| Cost of goods sold | 292.4 | 274.0 | 6.7 % | 1,226.5 | 1,095.3 | 12.0 % |
| Gross profit | 87.7 | 84.1 | 4.3 % | 381.7 | 376.8 | 1.3 % |
| Selling, general and administrative expenses | 42.3 | 40.3 | 5.0 % | 168.6 | 146.7 | 14.9 % |
| Other operating (income) expense, net | (12.2) | 17.0 | (172.5)% | 29.5 | 64.2 | (54.0)% |
| Operating income | 57.6 | 26.8 | 115.0 % | 183.6 | 165.9 | 10.7 % |
| Equity in net income from affiliated companies | (6.5) | (13.9) | (53.1)% | (37.6) | (38.8) | (3.1)% |
| Interest expense, net | 29.1 | 35.0 | (16.9)% | 113.7 | 179.0 | (36.5)% |
| Debt extinguishment costs | 1.1 | 61.4 | (98.3)% | 7.8 | 61.9 | (87.4)% |
| Other expense (income), net | (2.0) | 3.2 | (163.9)% | 11.1 | 24.4 | (54.5)% |
| Income (loss) before income taxes and noncontrolling interest | 35.9 | (58.9) | (160.9)% | 88.6 | (60.6) | (246.2)% |
| Provision for (benefit from) income taxes ⁽¹⁾ | 7.4 | (124.5) | (105.9)% | 29.0 | (119.2) | (124.3)% |
| Effective tax rate | 20.6% | 211.4% | | 32.7% | 196.6% | |
| Net income | 28.5 | 65.6 | (56.6)% | 59.6 | 58.6 | 1.7 % |
| Less: Net income attributable to the noncontrolling interest | 0.3 | 0.6 | (42.7)% | 1.3 | 1.0 | 30.0 % |
| Net income attributable to PQ Group Holdings Inc. | \$ 28.2 | \$ 65.0 | (56.7)% | \$ 58.3 | \$ 57.6 | 1.2 % |
| Net income per share: | | | | | | |
| Basic income per share | \$ 0.21 | \$ 0.49 | | \$ 0.44 | \$ 0.52 | |
| Diluted income per share | \$ 0.21 | \$ 0.49 | | \$ 0.43 | \$ 0.52 | |
| Weighted average shares outstanding: | | | | | | |
| Basic | 133,765,294 | 133,138,140 | | 133,380,567 | 111,299,670 | |
| Diluted | 134,987,604 | 133,895,646 | | 134,684,931 | 111,669,037 | |

⁽¹⁾ Net of a \$5.8 million and \$15.6 million provision for GILTI for the three months and year-ended December 31, 2018, respectively, and a \$4.5 million and \$6.0 million provisional benefit adjustment for the impact of the U.S. Tax Cuts and Job Act of 2017 and the Dutch Tax Plan 2019 for the three months and year-ended December 31, 2018, respectively. Net of a \$106.5 million provisional benefit adjustment for the impact of the U.S. Tax Cuts and Job Act of 2017 for the year-ended December 31, 2017.

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

| | December 31, 2018 | December 31, 2017 |
|---|----------------------|----------------------|
| ASSETS | | |
| Cash and cash equivalents | \$ 57.9 | \$ 66.2 |
| Receivables, net | 196.8 | 193.5 |
| Inventories | 264.7 | 262.4 |
| Prepaid and other current assets | 39.2 | 26.9 |
| Total current assets | 558.6 | 549.0 |
| Investments in affiliated companies | 468.2 | 469.3 |
| Property, plant and equipment, net | 1,209.0 | 1,230.4 |
| Goodwill | 1,254.9 | 1,306.0 |
| Other intangible assets, net | 728.4 | 786.1 |
| Other long-term assets | 108.3 | 74.7 |
| Total assets | \$ 4,327.4 | \$ 4,415.5 |
| LIABILITIES | | |
| Notes payable and current maturities of long-term debt | \$ 7.2 | \$ 45.2 |
| Accounts payable | 148.4 | 149.3 |
| Accrued liabilities | 100.0 | 93.9 |
| Total current liabilities | 255.6 | 288.4 |
| Long-term debt, excluding current portion | 2,106.7 | 2,185.3 |
| Deferred income taxes | 196.1 | 189.3 |
| Other long-term liabilities | 104.8 | 120.6 |
| Total liabilities | 2,663.2 | 2,783.6 |
| Commitments and contingencies | | |
| EQUITY | | |
| Common stock (\$0.01 par); authorized shares 450,000,000; issued shares 135,758,269 and 135,244,379 on December 31, 2018 and December 31, 2017, respectively; outstanding shares 135,592,045 and 135,244,379 on December 31, 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 December 31, 2018 and December 31, 2017 | — | — |
| Additional paid-in capital | 1,674.7 | 1,655.1 |
| Retained earnings (accumulated deficit) | 25.5 | (32.8) |
| Treasury stock, at cost; shares 166,224 and 0 on December 31, 2018 and 2017, respectively | (2.9) | — |
| Accumulated other comprehensive (loss) income | (39.1) | 4.3 |
| Total PQ Group Holdings Inc. equity | 1,659.6 | 1,628.0 |
| Noncontrolling interest | 4.6 | 3.9 |
| Total equity | 1,664.2 | 1,631.9 |
| Total liabilities and equity | \$ 4,327.4 | \$ 4,415.5 |

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

| | Years ended December 31, | |
|---|--------------------------|----------------|
| | 2018 | 2017 |
| Cash flows from operating activities: | | |
| Net income | \$ 59.6 | \$ 58.6 |
| Adjustments to reconcile net income to net cash provided by operating activities: | | |
| Depreciation | 132.6 | 124.6 |
| Amortization | 52.6 | 52.6 |
| Amortization of inventory step-up | 1.6 | 0.9 |
| Amortization of deferred financing costs and original issue discount | 6.1 | 8.7 |
| Debt extinguishment costs | 5.6 | 61.4 |
| Foreign currency exchange loss | 13.8 | 25.8 |
| Pension and postretirement healthcare benefit expense | 1.1 | 3.3 |
| Pension and postretirement healthcare benefit funding | (7.6) | (7.9) |
| Deferred income tax provision (benefit) | 3.4 | (140.2) |
| Net loss on asset disposals | 6.6 | 5.8 |
| Stock compensation | 19.5 | 8.8 |
| Equity in net income from affiliated companies | (37.6) | (38.8) |
| Dividends received from affiliated companies | 40.2 | 44.1 |
| Net interest income on swaps designated as net investment hedges | (4.9) | — |
| Gain on contract termination | (20.6) | — |
| Other, net | (1.5) | (4.2) |
| Working capital changes that provided (used) cash, excluding the effect of business combinations: | | |
| Receivables | (10.5) | (11.5) |
| Inventories | (9.0) | (21.2) |
| Prepays and other current assets | (6.3) | (3.4) |
| Accounts payable | (0.1) | 4.3 |
| Accrued liabilities | 4.0 | (6.5) |
| Net cash provided by operating activities | <u>248.6</u> | <u>165.2</u> |
| Cash flows from investing activities: | | |
| Purchases of property, plant and equipment | (131.7) | (140.5) |
| 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) |
| Proceeds from sale of assets | 12.4 | — |
| Net interest proceeds on swaps designated as net investment hedges | 4.9 | — |
| Other, net | 1.1 | 1.3 |
| Net cash used in investing activities | <u>(119.3)</u> | <u>(196.0)</u> |
| Cash flows from financing activities: | | |
| Draw down of revolver | 141.8 | 357.8 |
| Repayments of revolver | (166.8) | (334.2) |
| Issuance of long-term debt under the New Market Tax Credit arrangement | — | 8.8 |
| Issuance of long-term debt, net of original issue discount and financing fees | 1,267.0 | 299.7 |
| Debt issuance costs | (6.4) | (4.7) |
| Debt prepayment fees | — | (47.9) |
| Repayments of long-term debt | (1,369.7) | (739.5) |
| IPO proceeds | — | 507.5 |
| IPO costs | — | (26.8) |
| Stock repurchases | (2.8) | — |
| Distributions to noncontrolling interests | (0.7) | (0.9) |
| Other | 0.4 | — |
| Net cash (used in) provided by financing activities | <u>(137.2)</u> | <u>19.8</u> |
| Effect of exchange rate changes on cash, cash equivalents and restricted cash | 0.4 | (6.9) |
| Net change in cash, cash equivalents and restricted cash | (7.5) | (17.9) |
| Cash, cash equivalents and restricted cash at beginning of period | 67.2 | 85.1 |
| Cash, cash equivalents and restricted cash at end of period | <u>\$ 59.7</u> | <u>\$ 67.2</u> |

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

| | Three months ended December 31, | | Years ended December 31, | |
|---|------------------------------------|----------|-----------------------------|----------|
| | 2018 | 2017 | 2018 | 2017 |
| (in millions) | | | | |
| Reconciliation of net income attributable to PQ Group Holdings Inc. to Segment Adjusted EBITDA | | | | |
| Net income attributable to PQ Group Holdings Inc. | \$ 28.2 | \$ 65.0 | \$ 58.3 | \$ 57.6 |
| Provision (benefit) for income taxes | 7.4 | (124.5) | 29.0 | (119.2) |
| Interest expense, net | 29.1 | 35.0 | 113.7 | 179.0 |
| Depreciation and amortization | 45.9 | 48.0 | 185.2 | 177.1 |
| EBITDA | 110.6 | 23.5 | 386.2 | 294.5 |
| Joint venture depreciation, amortization and interest ^(a) | 3.4 | 3.0 | 12.6 | 11.1 |
| Amortization of investment in affiliate step-up ^(b) | 1.6 | 1.7 | 6.6 | 8.6 |
| Amortization of inventory step-up ^(c) | — | — | 1.6 | 0.9 |
| Debt extinguishment costs | 1.1 | 61.4 | 7.8 | 61.9 |
| Net (gain) loss on asset disposals ^(d) | (4.5) | (0.6) | 6.6 | 5.8 |
| Foreign currency exchange (gain) loss ^(e) | (1.5) | 4.2 | 13.8 | 25.8 |
| LIFO expense ^(f) | 2.5 | 0.5 | 8.4 | 3.7 |
| Management advisory fees ^(g) | — | — | — | 3.8 |
| Transaction and other related costs ^(h) | — | 2.1 | 0.9 | 7.4 |
| Equity-based compensation | 7.6 | 4.9 | 19.5 | 8.8 |
| Restructuring, integration and business optimization expenses ⁽ⁱ⁾ | 8.3 | 5.2 | 14.0 | 13.2 |
| Defined benefit plan pension cost ^(j) | (1.1) | 0.7 | (0.8) | 2.9 |
| Gain on contract termination ^(k) | (20.6) | — | (20.6) | — |
| Other ^(l) | 1.7 | 2.8 | 7.4 | 4.9 |
| Adjusted EBITDA | 109.1 | 109.4 | 464.0 | 453.3 |
| Unallocated corporate expenses | 9.7 | 7.0 | 37.0 | 30.5 |
| Segment Adjusted EBITDA | \$ 118.8 | \$ 116.4 | \$ 501.0 | \$ 483.8 |

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 (“Eco”) 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) 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 statement of operations 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 consulting agreements were terminated upon completion of our initial public offering ("IPO") on October 3, 2017.
- (h) Relates to certain transaction costs related to our IPO and the Sovitec acquisition 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) Represents a non-cash gain on the write-off of the remaining liability under a contractual supply arrangement. As part of Eco's acquisition of substantially all of the assets of Solvay USA Inc's sulfuric acid refining services business unit on December 1, 2014, we recognized a liability as part of business combination accounting related to our obligation to serve a customer under a pre-existing unfavorable supply agreement. In December 2018, the customer who was party to the agreement closed its facility, and as a result, we were relieved from our obligation to continue to supply the customer on the below market contract. Because the fair value of the unfavorable contract liability was recognized as part of the application of business combination accounting, and since the write-off of the remaining liability was non-cash in nature, we believe this gain is a special item that is not representative of our ongoing business operations.
- (l) 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 December 31, | | | | | |
|--|---------------------------------|--------------------------|----------------|----------------|--------------------------|----------------|
| | 2018 | | | 2017 | | |
| | Pre-tax | Tax expense (benefit) | After-tax | Pre-tax | Tax expense (benefit) | After-tax |
| | (in millions) | | | | | |
| Net income before non-controlling interest | \$ 35.9 | \$ 7.4 | \$ 28.5 | \$ (58.9) | \$ (124.5) | \$ 65.6 |
| Less: Net income attributable to non-controlling interest | 0.3 | — | 0.3 | 0.6 | — | 0.6 |
| Net income attributable to PQ Group Holdings Inc. | 35.6 | 7.4 | 28.2 | (59.5) | (124.5) | 65.0 |
| Amortization of investment in affiliate step-up ^(b) | 1.6 | 0.6 | 1.0 | 1.7 | (0.8) | 2.5 |
| Debt extinguishment costs | 1.1 | 0.5 | 0.6 | 61.4 | 15.3 | 46.1 |
| Net (gain) loss on asset disposals ^(d) | (4.5) | (1.8) | (2.7) | (0.6) | (0.8) | 0.2 |
| Foreign currency exchange (gain) loss ^(c) | (1.5) | 2.3 | (3.8) | 4.2 | 3.0 | 1.2 |
| LIFO expense ^(f) | 2.5 | 0.8 | 1.7 | 0.5 | (0.4) | 0.9 |
| Transaction and other related costs ^(h) | — | — | — | 2.1 | (0.4) | 2.5 |
| Equity-based compensation | 7.6 | — | 7.6 | 4.9 | 0.5 | 4.4 |
| Restructuring, integration and business optimization expenses ⁽ⁱ⁾ | 8.3 | 3.0 | 5.3 | 5.2 | 2.2 | 3.0 |
| Defined benefit plan pension cost ^(j) | (1.1) | (0.4) | (0.7) | 0.7 | — | 0.7 |
| Gain on contract termination ^(k) | (20.6) | (7.6) | (13.0) | — | — | — |
| Other ^(l) | 1.7 | 0.4 | 1.3 | 2.8 | (2.5) | 5.3 |
| Adjusted Net Income, including non-cash GILTI tax and tax reform | 30.6 | 5.2 | 25.5 | 23.4 | (108.6) | 131.9 |
| Impact of non-cash GILTI tax ⁽²⁾ | — | (2.2) | 2.2 | — | — | — |
| Impact of tax reform ⁽³⁾ | — | 4.5 | (4.5) | — | 106.5 | (106.5) |
| Adjusted Net Income ⁽¹⁾ | <u>\$ 30.6</u> | <u>\$ 7.5</u> | <u>\$ 23.2</u> | <u>\$ 23.4</u> | <u>\$ (2.1)</u> | <u>\$ 25.4</u> |
| Adjusted Net Income per share: | | | | | | |
| Basic income per share | | | \$ 0.17 | | | \$ 0.19 |
| Diluted income per share | | | \$ 0.17 | | | \$ 0.19 |
| Weighted average shares outstanding: | | | | | | |
| Basic | | | 133,765,294 | | | 133,138,140 |
| Diluted | | | 134,987,604 | | | 133,895,646 |

Years ended December 31,

| | 2018 | | | 2017 | | |
|--|---------------|--------------------------|-------------|-----------|--------------------------|-------------|
| | Pre-tax | Tax expense (benefit) | After-tax | Pre-tax | Tax expense (benefit) | After-tax |
| | (in millions) | | | | | |
| Net income before non-controlling interest | \$ 88.6 | \$ 29.0 | \$ 59.6 | \$ (60.6) | \$ (119.2) | \$ 58.6 |
| Less: Net income attributable to non-controlling interest | 1.3 | — | 1.3 | 1.0 | — | 1.0 |
| Net income attributable to PQ Group Holdings Inc. | 87.3 | 29.0 | 58.3 | (61.6) | (119.2) | 57.6 |
| Amortization of investment in affiliate step-up ^(b) | 6.6 | 2.5 | 4.1 | 8.6 | 2.1 | 6.5 |
| Amortization of inventory step-up ^(c) | 1.6 | 0.6 | 1.0 | 0.9 | 0.3 | 0.6 |
| Debt extinguishment costs | 7.8 | 2.9 | 4.9 | 61.9 | 15.5 | 46.4 |
| Net loss on asset disposals ^(d) | 6.6 | 2.4 | 4.2 | 5.8 | 1.9 | 3.9 |
| Foreign currency exchange loss ^(e) | 13.8 | 5.6 | 8.2 | 25.8 | 9.7 | 16.1 |
| LIFO expense ^(f) | 8.4 | 3.1 | 5.3 | 3.7 | 0.9 | 2.8 |
| Management advisory fees ^(g) | — | — | — | 3.8 | 1.0 | 2.8 |
| Transaction and other related costs ^(h) | 0.9 | 0.3 | 0.6 | 7.4 | 1.8 | 5.6 |
| Equity-based compensation | 19.5 | 4.6 | 14.9 | 8.8 | 2.2 | 6.6 |
| Restructuring, integration and business optimization expenses ⁽ⁱ⁾ | 14.0 | 5.2 | 8.8 | 13.2 | 5.6 | 7.6 |
| Defined benefit plan pension cost ^(j) | (0.8) | (0.3) | (0.5) | 2.9 | 0.9 | 2.0 |
| Gain on contract termination ^(k) | (20.6) | (7.6) | (13.0) | — | — | — |
| Other ^(l) | 7.4 | 2.8 | 4.6 | 4.9 | (1.0) | 5.9 |
| Adjusted Net Income, including non-cash GILTI tax and tax reform | 152.5 | 51.1 | 101.4 | 86.1 | (78.4) | 164.4 |
| Impact of non-cash GILTI tax ⁽²⁾ | — | (21.2) | 21.2 | — | — | — |
| Impact of tax reform ⁽³⁾ | — | 6.0 | (6.0) | — | 106.5 | (106.5) |
| Adjusted Net Income ⁽¹⁾ | \$ 152.5 | \$ 35.9 | \$ 116.6 | \$ 86.1 | \$ 28.1 | \$ 57.9 |
| Adjusted Net Income per share: | | | | | | |
| Basic income per share | | | \$ 0.87 | | | \$ 0.52 |
| Diluted income per share | | | \$ 0.87 | | | \$ 0.52 |
| Weighted average shares outstanding: | | | | | | |
| Basic | | | 133,380,567 | | | 111,299,670 |
| Diluted | | | 134,684,931 | | | 111,669,037 |

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 the GILTI provisions of the 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 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 adjustment for the impact of the TCJA and the Dutch Tax Plan 2019 recorded in net income.

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

| | Three months ended December 31, | | | Years ended December 31, | | |
|-------------------------------------|------------------------------------|-----------------|---------------|-----------------------------|-------------------|--------------|
| | 2018 | 2017 | % Change | 2018 | 2017 | % Change |
| (in millions, except percentages) | | | | | | |
| Sales: | | | | | | |
| EC&S | \$ 141.3 | \$ 122.9 | 15.0 % | \$ 527.7 | \$ 473.7 | 11.4 % |
| PM&C | 239.5 | 235.9 | 1.5 % | 1,083.8 | 1,001.8 | 8.2 % |
| Eliminations | (0.7) | (0.7) | — % | (3.3) | (3.4) | (2.9)% |
| Total sales | <u>\$ 380.1</u> | <u>\$ 358.1</u> | <u>6.1 %</u> | <u>\$ 1,608.2</u> | <u>\$ 1,472.1</u> | <u>9.2 %</u> |
| Zeolyst Joint Venture Sales | \$ 36.5 | \$ 42.8 | (14.7)% | \$ 156.7 | \$ 143.8 | 9.0 % |
| Adjusted EBITDA: | | | | | | |
| EC&S | \$ 69.0 | \$ 61.0 | 13.1 % | \$ 257.6 | \$ 243.6 | 5.7 % |
| PM&C | 49.8 | 55.4 | (10.2)% | 243.4 | 240.2 | 1.3 % |
| Corporate | (9.7) | (7.0) | 37.7 % | (37.0) | (30.5) | 21.3 % |
| Total Adjusted EBITDA | <u>\$ 109.1</u> | <u>\$ 109.4</u> | <u>(0.3)%</u> | <u>\$ 464.0</u> | <u>\$ 453.3</u> | <u>2.4 %</u> |
| Adjusted EBITDA Margin: | | | | | | |
| EC&S ⁽¹⁾ | 38.8% | 36.8% | | 37.6% | 39.4% | |
| PM&C | 20.8% | 23.5% | | 22.5% | 24.0% | |
| Total Adjusted EBITDA Margin | <u>26.2%</u> | <u>27.3%</u> | | <u>26.3%</u> | <u>28.1%</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 December 31, | | Years ended December 31, | |
|---|------------------------------------|---------------|-----------------------------|----------------|
| | 2018 | 2017 | 2018 | 2017 |
| | (in millions) | | | |
| Net cash provided by operating activities | \$ 82.6 | \$ 55.4 | \$ 248.6 | \$ 165.2 |
| Less: | | | | |
| Purchases of property, plant and equipment ⁽¹⁾ | (36.4) | (50.3) | (131.7) | (140.5) |
| Free cash flow | <u>46.2</u> | <u>5.1</u> | <u>116.9</u> | <u>24.7</u> |
| Adjustments to free cash flow: | | | | |
| Proceeds from sale of assets | 12.4 | — | 12.4 | — |
| Net interest proceeds on currency swaps | 0.6 | — | 4.9 | — |
| Adjusted free cash flow ⁽²⁾ | <u>\$ 59.2</u> | <u>\$ 5.1</u> | <u>\$ 134.2</u> | <u>\$ 24.7</u> |
| Net cash used in investing activities ⁽³⁾ | \$ (23.5) | \$ (49.5) | \$ (119.3) | \$ (196.0) |
| Net cash (used in) provided by financing activities | \$ (59.4) | \$ (9.4) | \$ (137.2) | \$ 19.8 |

⁽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 on 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.