UNITED STATES SECURITIES AND EXCHANGE COMMISSION WASHINGTON, D.C. 20549

FORM S-8 **REGISTRATION STATEMENT**

under the **SECURITIES ACT OF 1933**

PQ GROUP HOLDINGS INC. (Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction

of Incorporation or Organization)

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

300 Lindenwood Drive Valleybrooke Corporate Center Malvern, Pennsylvania 19355 (610) 651-4400 (Address, Including Zip Code, of Principal Executive Offices)

> 2016 Stock Incentive Plan 2017 Omnibus Incentive Plan (Full Title of the Plan)

James F. Gentilcore President and Chief Executive Officer PQ Group Holdings Inc. **300 Lindenwood Drive** Valleybrooke Corporate Center Malvern, Pennsylvania 19355 (Name, Address and Telephone Number, Including Area Code, of Agent For Service)

with copies to:

Craig E. Marcus Ropes & Gray LLP **Prudential Tower 800 Boylston Street** Boston, MA 02199 (617) 951-7000

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, anon-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer Non-accelerated filer

☑ (Do not check if a smaller reporting company) Accelerated filer

Smaller reporting company 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 7(a)(2)(B) of the Securities Act. \Box

CALCULATION OF REGISTRATION FEE

| | Amount to | Proposed maximum offering | Proposed Maximum | Amount of |
|--|---------------------|---------------------------------|-----------------------------|---------------------|
| Title of securities to be registered | be Registered(1) | price per share | Aggregate offering price | registration fee |
| 2016 Stock Incentive Plan Common Stock, \$0.01 par value | 2,125,789(2) | \$8.162(3) | \$17,350,690(3) | |
| 2017 Omnibus Incentive Plan Common Stock, \$0.01 par value | 7,716,580 | \$16.97(4) | \$130,950,363 | \$16,304 |
| TOTALS | 9,842,369 | | \$148,301,053 | \$18,465 |

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement also covers an indeterminable number of additional shares of Common Stock that may become issuable pursuant to terms designed to prevent dilution resulting from stock splits, stock dividends or similar events.
- (2) Represents shares of Common Stock reserved for issuance upon the exercise of options previously granted under the 2016 Stock Incentive Plan.
- (3) The proposed maximum aggregate offering price for the 2016 Stock Incentive Plan consists of \$888,764 payable in respect of 128,933 shares subject to options at an exercise price of \$6.88 per share, \$9,994,910 payable in respect of 1,243,148 shares subject to options at an exercise price of \$8.04 per share, \$2,607,870 payable in respect of 323,959 shares subject to options at an exercise price of \$8.05 per share, and \$3,859,146 payable in respect of 429,749 shares subject to options at an exercise price of \$8.98 per share.
- (4) This calculation is made solely for the purpose of determining the registration fee pursuant to the provisions of Rule 457(c) and (h) under the Securities Act of 1933, as amended. The fee is calculated on the basis of the average of the high and low sale prices per share of the Common Stock on the New York Stock Exchange as of a date (September 29, 2017) within five business days prior to filing this Registration Statement.

PART I INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

Information required by Part I to be contained in the Section 10(a) prospectus is omitted from this Registration Statement in accordance with Rule 428 under the Securities Act of 1933, as amended (the "Securities Act"), and the Note to Part I of Form S-8.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are incorporated herein by reference:

(1) The Registrant's Prospectus dated September 28, 2017 and filed with the Commission pursuant to Rule 424(b) under the Securities Act relating to the Registrant's Registration Statement on Form S-1 as amended (Registration No. 333-218650); and

(2) The description of the Registrant's Common Stock, \$0.01 par value per share, contained in the Registrant's Registration Statement on Form8-A, filed with the Commission pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), on September 29, 2017, and any other amendments or reports filed for the purpose of updating such description (File No. 001-38221).

All reports and other documents filed by the Registrant after the date hereof pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the filing of a posteffective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of filing of such reports and documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

The Registrant's description of the conversion of its shares of Class B common stock into shares of common stock and its related diluted impact on basic and diluted earnings per share for the six months ended June 30, 2017 and 2016, the years ended December 31, 2016 and 2015 and the successor period from July 30 to December 31, 2014, as set forth in Exhibit 99.1, is incorporated herein by reference.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

Not applicable.

Item 6. Indemnification of Directors and Officers.

Section 145 of the General Corporation Law of the State of Delaware provides as follows:

"A corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, suit or proceeding by judgment, conviction or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to be in or not opposed to any criminal action or proceeding, had reasonable cause to believe the best interests of the corporation, and, with respect to any criminal action or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or upon a plea of nolo contendere or its equivalent shall not, of itself, create a presumption that the person did not act in good faith and in a manner which the person's conduct was unlawful.

A corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action or suit if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation unless and only to the extent that Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper."

As permitted by the Delaware General Corporation Law, the Registrant's certificate of incorporation includes a provision to eliminate the personal liability of its directors for monetary damages for breach of their fiduciary duties as directors, subject to certain exceptions. In addition, the Registrant's bylaws provide that the Registrant is required to indemnify its officers and directors under certain circumstances, including those circumstances in which indemnification would otherwise be discretionary, and the Registrant is required to advance expenses to its officers and directors as incurred in connection with proceedings against such officers and directors for which they may be indemnified.

The Registrant has entered into indemnification agreements with its directors and officers. These agreements provide broader indemnity rights than those provided under the Delaware General Corporation Law and under the Registrant's certificate of incorporation and bylaws. The indemnification agreements are not intended to deny or otherwise limit third-party or derivative suits against the Registrant or its directors or officers, but to the extent a director or officer were entitled to indemnity or contribution under the indemnification agreement, the financial burden of a third-party suit would be borne by the Registrant, and the Registrant would not benefit from derivative recoveries against the director or officer. Such recoveries would accrue to the Registrant's benefit but would be offset by its obligations to the director or officer under the indemnification agreement.

The Registrant maintains directors' and officers' liability insurance for the benefit of its directors and officers.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

| Exhibit <u>Number</u> | Description |
|--------------------------|--|
| 4.1 | Second Restated Certificate of Incorporation of PQ Group Holdings Inc. |
| 4.2 | Amended and Restated Bylaws of PQ Group Holdings Inc. (previously filed as Exhibit 3.2 to the registration statement on FormS-1 (File No. 333-218650) and incorporated herein by reference) |
| 4.3 | PQ Group Holdings Inc. 2017 Omnibus Incentive Plan (previously filed as Exhibit 10.14 to the registration statement on FormS-1 (File No. 333-218650) and incorporated herein by reference) |
| 5.1 | Opinion of Ropes & Gray LLP |
| 23.1 | Consent of PricewaterhouseCoopers LLP related to the financial statements of PQ Group Holdings Inc. as of December 31, 2016 and 2015 and for the years then ended. |
| 23.2 | Consent of Deloitte & Touche LLP related to the financial statements of Eco Services Operations LLC (accounting predecessor to PQ Group Holdings Inc.) for the period from inception (July 30, 2014) to December 31, 2014 (Successor Period), and of Eco, a business unit of Solvay USA Inc., for the period from January 1, 2014 through November 30, 2014 (Predecessor Period) |
| 23.3 | Consent of PricewaterhouseCoopers LLP related to the financial statements of PQ Holdings Inc. as of December 31, 2015 and 2014 and for each of the three years in the period ended December 31, 2015 |
| 23.4 | Consent of PricewaterhouseCoopers LLP related to the financial statements of Zeolyst International as of December 31, 2016 and 2015 and for each of the three years in the period ended December 31, 2016 |
| 23.5 | Consent of Ropes & Gray LLP (included in Exhibit 5.1) |

- 24.1 Power of Attorney (included on the signature page in Part II)
- 99.1 Additional Financial Information

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of a prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement; provided, however, that paragraphs (a)(1)(i) and (a)(1)(i) above shall not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in the Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the Registrant's annual report pursuant to Section 13(a) or 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

INDEX OF EXHIBITS

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Malvern, Commonwealth of Pennsylvania, on the 2nd day of October, 2017.

PQ GROUP HOLDINGS INC.

By: /s/ James F. Gentilcore

James F. Gentilcore

Chief Executive Officer, President and Director

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints James F. Gentilcore, Michael Crews and Joseph S. Koscinski, and each of them, his or her true and lawful attorney-in-fact and agent, with full power of substitution and revocation, for him or her and in his or her name, place and stead, in any and all capacities, to execute any or all amendments including any post-effective amendments and supplements to this Registration Statement on Form S-8 of PQ Group Holdings Inc., and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

| Signature | Title | Date |
|--|--|-----------------|
| /s/ James F. Gentilcore James F. Gentilcore | Chief Executive Officer, President and Director (Principal Executive Officer) | October 2, 2017 |
| /s/ Michael Crews | Executive Vice President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) | October 2, 2017 |
| /s/ Michael Boyce Michael Boyce | Chairman of the Board of Directors | October 2, 2017 |
| /s/ Greg Brenneman Greg Brenneman | Director | October 2, 2017 |
| /s/ Timothy Walsh Timothy Walsh | Director | October 2, 2017 |
| /s/ Mark McFadden Mark McFadden | Director | October 2, 2017 |
| /s/ Robert Toth Robert Toth | Director | October 2, 2017 |
| /s/ Robert Coxon Robert Coxon | Director | October 2, 2017 |
| /s/ Andrew Currie Andrew Currie | Director | October 2, 2017 |

| /s/ Jonny Ginns Jonny Ginns | Director | October 2, 2017 |
|--|----------|-----------------|
| /s/ Kyle Vann Kyle Vann | Director | October 2, 2017 |
| /s/ Martin S. Craighead Martin S. Craighead | Director | October 2, 2017 |
| /s/ Kimberly Ross Kimberly Ross | Director | October 2, 2017 |

SECOND RESTATED CERTIFICATE OF INCORPORATION

OF

PQ GROUP HOLDINGS INC.

PQ Group Holdings Inc., a Delaware corporation (the "<u>Corporation</u>"), hereby certifies that this Second Restated Certificate of Incorporation has been duly adopted in accordance with Sections 242 and 245 of the General Corporation Law of the State of Delaware (the "<u>DGCL</u>"), and that:

A. The name of the Corporation is: PQ Group Holdings Inc.

B. The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of Delaware on August 7, 2015 and was amended and restated on May 4, 2016, corrected on May 26, 2016 and further amended on September 22, 2017 (as so amended, restated and corrected, the "Original Certificate of Incorporation").

C. This Second Restated Certificate of Incorporation amends and restates the Original Certificate of Incorporation.

D. The Certificate of Incorporation upon the filing of this Second Restated Certificate of Incorporation, shall read as follows:

ARTICLE I - NAME

The name of the corporation is PQ Group Holdings Inc. (the "Corporation").

ARTICLE II - REGISTERED OFFICE AND AGENT

The address of the Corporation's registered office in the State of Delaware is 850 New Burton Road, Suite 201, Dover, Kent County, DE 19904. The name of the Corporation's registered agent at such address is Cogency Global Inc.

ARTICLE III - PURPOSE

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware (the "DGCL").

ARTICLE IV - CAPITALIZATION

(a) <u>Authorized Shares</u>. The total number of shares of stock which the Corporation shall have authority to issue is 500,000,000, consisting of 450,000,000 shares of Common Stock, par value \$0.01 per share ("<u>Common Stock</u>"), and 50,000,000 shares of Preferred Stock, par value \$0.01 per share ("<u>Preferred Stock</u>"). Such stock may be issued from time to time by the Corporation for such consideration as may be fixed by the board of directors of the Corporation (the "<u>Board of Directors</u>").

(b) <u>Common Stock</u>. Subject to the powers, preferences and rights of any Preferred Stock, including any series thereof, having any preference or priority over, or rights superior to, the Common Stock and except as otherwise provided by law and this Article IV, the holders of the Common Stock shall have and possess all powers and voting and other rights pertaining to the stock of the Corporation.

(i) Voting. Each holder of Common Stock, as such, shall be entitled to one vote for each share of Common Stock held of record by such holder on all matters on which stockholders generally are entitled to vote; provided, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to this Second Restated Certificate of Incorporation (including, but not limited to, any certificate of designations relating to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to this Second Restated Certificate of Incorporation (including, but not limited to, any certificate of designations relating to any series of Preferred Stock) or pursuant to the DGCL. There shall be no cumulative voting.

(ii) *Dividends*. Dividends may be declared and paid on the Common Stock from funds lawfully available therefor as and when determined by the Board of Directors and subject to any preferential dividend rights of any then outstanding Preferred Stock. Except as otherwise provided by the DGCL or this Second Restated Certificate of Incorporation, the holders of record of Common Stock shall share ratably in all dividends payable in cash, stock or otherwise and other distributions, whether in respect of liquidation or dissolution (voluntary or involuntary) or otherwise.

(iii) No Preemptive Rights. The holders of the Common Stock shall have no preemptive rights to subscribe for any shares of any class of stock of the Corporation whether now or hereafter authorized.

(iv) No Conversion Rights. The Common Stock shall not be convertible into, or exchangeable for, shares of any other class or classes or of any other series of the same class of the Corporation's capital stock.

(v) *Liquidation Rights*. Upon the dissolution or liquidation of the Corporation, whether voluntary or involuntary, holders of Common Stock will be entitled to receive all assets of the Corporation available for distribution to its stockholders, subject to any preferential rights of any then outstanding Preferred Stock. A merger or consolidation of the Corporation with or into any other corporation or other entity or a sale or conveyance of all or any part of the assets of the Corporation, in any such case which shall not in fact result in the liquidation of the Corporation and the distribution of assets to its stockholders, shall not be deemed to be a voluntary or involuntary liquidation or dissolution or winding up of the Corporation within the meaning of this Article IV(b)(v).

(c) <u>Preferred Stock</u>. Shares of Preferred Stock may be issued in one or more series, from time to time, with each such series to consist of such number of shares and to have such voting powers relative to other classes or series of Preferred Stock, if any, or Common Stock, full or limited or no voting powers, and such designations, preferences and relative, participating, optional or other special rights, and the qualifications, limitations or restrictions thereof, as shall be stated in the resolution or resolutions providing for the issuance of such series adopted by the Board of Directors, and the Board of Directors is hereby expressly vested with the authority, to the full extent now or hereafter provided by applicable law, to adopt any such resolution or resolutions. Except as otherwise provided in this Second Restated Certificate of Incorporation, no vote of the holders of the Corporation. Any shares of Preferred Stock that are redeemed, purchased or acquired by the Corporation may be reissued except as otherwise provided by the Corporation may be reissued except as otherwise provided by law or this Second Restated Certificate of Incorporation. Different series of Preferred Stock shall not be construed to constitute different classes of shares for the purposes of voting by classes unless expressly provided in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors.

(d) <u>No Class Vote On Changes In Authorized Number of Shares Of Preferred Stock</u>. Subject to the special rights of the holders of any series of Preferred Stock pursuant to the terms of this Second Restated Certificate of Incorporation, any certificate of designations or any resolution or resolutions providing for the issuance of such series of stock adopted by the Board of Directors, the number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, irrespective of the provisions of Section 242(b)(2) of the DGCL.

ARTICLE V - BOARD OF DIRECTORS

(a) Number of Directors: Vacancies and Newly Created Directorships. The number of directors constituting the Board of Directors shall be not fewer than three (3) and not more than fifteen (15), each of whom shall be a natural person. All elections of directors shall be determined by a plurality of the votes cast. Subject to the special rights of the holders of any series of Preferred Stock to elect directors, the precise number of directors shall be fixed exclusively pursuant to a resolution adopted by the Board of Directors. Vacancies and newly-created directorships shall be filled exclusively by vote of a majority of the directors then in office, even if less than a quorum, or by a sole remaining director, except that any vacancy created by the removal of a director by the stockholders for cause shall only be filled, in addition to any other vote otherwise required by law, by vote of a majority of the outstanding shares of Common Stock. No decrease in the number of director sconstituting the Board of Directors shall be removal of a director shall be elected for the unexpired term of his or her predecessor in office, and a director chosen to fill a position resulting from an increase in the number of directors shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of his or her successor and to his or her earlier death, resignation or removal.

(b) <u>Classified Board of Directors</u>. Subject to the special rights of the holders of any series of Preferred Stock to elect directors, the Board of Directors (other than those directors elected by the holders of any series of Preferred Stock) shall be classified into three classes: Class I; Class II; and Class III. Each class shall consist, as nearly as possible, of one-third of the total number of directors constituting the entire Board of Directors and the allocation of directors among the three classes shall be determined by the Board of Directors. The initial Class I Directors shall serve for a term expiring at the first annual meeting of stockholders of the Corporation following the filing of this Second Restated Certificate of Incorporation; and the initial Class III Directors shall serve for a term expiring at the second annual meeting of stockholders following the filing of this Second Restated Certificate of Incorporation. Each director in each class shall hold office until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. If the class of directors whose term expires at that meeting shall be elected to hold office or a term expiring at the annual meeting of stockholders following the filing of this stockholders to be held in the third year following the year of their election, with each director in each such class to hold office until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor is duly elected and qualified or until his or her successor

(c) <u>Removal</u>. Subject to the special rights of the holders of any series of Preferred Stock to elect directors, the directors of the Corporation may be removed only for cause by the affirmative vote of the holders of at least a majority of the voting power of the outstanding shares of capital stock of the Corporation entitled to vote generally in the election of directors, voting together as a single class, at a meeting of the stockholders called for that purpose.

ARTICLE VI - LIMITATION OF DIRECTOR LIABILITY

To the fullest extent that the DGCL or any other law of the State of Delaware (as they exist on the date hereof or as they may hereafter be amended) permits the limitation or elimination of the liability of directors, no director of the Corporation shall be liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. No amendment to, or modification or repeal of, this Article VI shall adversely affect any right or protection of a director of the Corporation existing hereunder with respect to any state of facts existing or act or omission occurring, or any cause of action, suit or claim that, but for this Article VI, would accrue or arise, prior to such amendment, modification or repeal. If the DGCL is amended after the Effective Time to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

ARTICLE VII - MEETINGS OF STOCKHOLDERS

(a) <u>Special Meetings of Stockholders</u>. Subject to any special rights of the holders of any series of Preferred Stock, and to the requirements of applicable law, special meetings of stockholders of the Corporation may be called only (i) by or at the direction of the chairman of the Board of Directors or (ii) by the Board of Directors pursuant to a written resolution adopted by a majority of the total number of directors which the Corporation would have if there were no vacancies. Any business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting.

(b) Election of Directors by Written Ballot. Election of directors need not be by written ballot.

ARTICLE VIII — AMENDMENTS TO THE BYLAWS AND CERTIFICATE OF INCORPORATION

(a) <u>Bylaws</u>. In furtherance and not in limitation of the powers conferred by law, the Board of Directors is expressly authorized to make, alter, amend or repeal the bylaws of the Corporation subject to the power of the stockholders of the Corporation entitled to vote with respect thereto to make, alter, amend or repeal the bylaws.

(b) <u>Amendments to the Certificate of Incorporation</u>. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Second Restated Certificate of Incorporation in the manner now or hereafter prescribed by the DGCL, and all rights conferred upon stockholders herein are granted subject to this reservation.

ARTICLE IX - RENOUNCEMENT OF CORPORATE OPPORTUNITY

(a) Scope. The provisions of this Article IX are set forth to define, to the extent permitted by applicable law, the duties of Exempted Persons (as defined below) to the Corporation with respect to certain classes or categories of business opportunities. "Exempted Persons" means investment funds affiliated with CCMP Capital Advisors, LP and their respective successors, Transferees and Affiliates (other than the Corporation and its subsidiaries) (collectively, the "<u>CCMP Entities</u>") and INEOS Investments Partnership and its respective successors, Transferees and Affiliates (other than the Corporation and its subsidiaries) (collectively, the "<u>INEOS Entities</u>"), and all of their respective partners, principals, directors, officers, members, managers and/or employees, including any of the foregoing who serves as officer or director of the Corporation. "<u>Affiliate</u>" means, with respect to any Person, any other Person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, such Person; the term "<u>control</u>," as used in this definition, means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of such Person, whether through the ownership of voting securities, by contract or otherwise, and "<u>controlled</u>," <u>"controlling</u>" and "<u>under common control</u>" have meanings correlative to the foregoing. "<u>Person</u>" means an individual, any general partnership, limited partnership, limited liability company, corporation, trust, business trust, joint stock company, joint venture, unincorporated association, cooperative or association or any other legal entity or organization of whatever nature, and shall include any successor (by merger or

otherwise) of such entity. "<u>Transferee</u>" means any Person who (i) becomes a beneficial owner of Common Stock upon having acquired such shares of Common Stock, solely with respect to a Transferee of a CCMP Entity, from an investment fund affiliated with CCMP Capital Advisors, LP or, solely with respect to a Transferee of INEOS Investments Partnership, from INEOS Investments Partnership and (ii) is designated in writing by the transferor as a "Transferee" and a copy of such writing is provided to the Corporation at or prior to the time of such transfer; <u>provided</u>, <u>however</u>, that a purchaser of Common Stock in a registered offering or in a transaction effected pursuant to Rule 144 under the Securities Act of 1933, as amended (or any similar or successor provision thereto), shall not be a "Transferee."

(b) <u>Competition and Allocation of Corporate Opportunities</u>. The Exempted Persons shall not have any fiduciary duty to refrain from engaging directly or indirectly in the same or similar business activities or lines of business as the Corporation or any of its subsidiaries. To the fullest extent permitted by applicable law, the Corporation, on behalf of itself and its subsidiaries, renounces any interest or expectancy of the Corporation and its subsidiaries in, or in being offered an opportunity to participate in, business opportunities that are from time to time available to the Exempted Persons, even if the opportunity is one that the Corporation or its subsidiaries might reasonably have pursued or had the ability or desire to pursue if granted the opportunity to do so, and each such Exempted Person shall have no duty to communicate or offer such business opportunity to the Corporation (and there shall be no restriction on the Exempted Persons using the general knowledge and understanding of the Corporation and the industry in which it operates which it has gained as an Exempted Person in considering and pursuing such opportunities or in making investment, voting, monitoring, governance or other decisions relating to other entities or securities) and, to the fullest extent permitted by applicable law, shall not be liable to the Corporation or any of its subsidiaries or officer or otherwise, by reason of the fact that such Exempted Person pursues or acquires such business opportunity, directs such business opportunity to another person or fails to present such business opportunity, or information regarding such business opportunity, to the Corporation or its subsidiaries, or uses such knowledge and understanding in the manner described herein.

(c) <u>Certain Matters Deemed Not Corporate Opportunities</u> In addition to and notwithstanding the foregoing provisions of this Article IX, a corporate opportunity shall not be deemed to belong to the Corporation if it is a business opportunity that the Corporation is not financially able or contractually permitted or legally able to undertake, or that is, from its nature, not in the line of the Corporation's business or is of no practical advantage to it or that is one in which the Corporation has no interest or reasonable expectancy.

(d) <u>Amendment of this Article</u>. No amendment or repeal of this Article IX in accordance with the provisions of paragraph (b) of Article VIII shall apply to or have any effect on the liability or alleged liability of any Exempted Person for or with respect to any activities or opportunities of which such Exempted Person becomes aware prior to such amendment or repeal. This Article IX shall not limit any protections or defenses available to, or indemnification or advancement rights of, any director or officer of the Corporation under this Second Restated Certificate of Incorporation, the Corporation's bylaws or applicable law.

ARTICLE X — BUSINESS COMBINATIONS

(a) Opt Out of DGCL 203. The Corporation shall not be governed by Section 203 of the DGCL.

(b) <u>Limitations on Business Combinations</u>. Notwithstanding the foregoing, the Corporation shall not engage in any business combination (as defined below), at any point in time at which the Corporation's Common Stock is registered under Section 12(b) or Section 12(g) of the Exchange Act, with any interested stockholder (as defined below) for a period of three (3) years following the time that such stockholder became an interested stockholder, unless:

(i) prior to such time, the Board of Directors approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder,

(ii) upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least eightyfive percent (85%) of the voting stock (as defined below) of the Corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (i) persons who are directors and also officers or (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer, or

(iii) at or subsequent to such time, the business combination is approved by the Board of Directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two thirds of the outstanding voting stock of the Corporation which is not owned by the interested stockholder.

(c) Definitions. For purposes of this Article X, references to:

(i) "affiliate" means, with respect to any person, any other person that directly, or indirectly through one or more intermediaries, controls, or is controlled by, or is under common control with, such person.

(ii) "associate," when used to indicate a relationship with any person, means: (i) any corporation, partnership, unincorporated association or other entity of which such person is a director, officer or partner or is, directly or indirectly, the owner of twenty percent (20%) or more of any class of voting stock; (ii) any trust or other estate in which such person has at least a twenty percent (20%) beneficial interest or as to which such person serves as trustee or in a similar fiduciary capacity; and (iii) any relative or spouse of such person, or any relative of such spouse, who has the same residence as such person.

(iii) "business combination," when used in reference to the Corporation and any interested stockholder of the Corporation, means:

(1) any merger or consolidation of the Corporation or any direct or indirect majority-owned subsidiary of the Corporation (a) with the interested stockholder, or (b) with any other corporation, partnership, unincorporated association or other entity if the merger or consolidation is caused by the interested stockholder and as a result of such merger or consolidation paragraph (b) of this Article X is not applicable to the surviving entity;

(2) any sale, lease, exchange, mortgage, pledge, transfer or other disposition (in one transaction or a series of transactions), except proportionately as a stockholder of the Corporation, to or with the interested stockholder, whether as part of a dissolution or otherwise, of assets of the Corporation or of any direct or indirect majority-owned subsidiary of the Corporation which assets have an aggregate market value equal to ten percent (10%) or more of either the aggregate market value of all the assets of the Corporation determined on a consolidated basis or the aggregate market value of all the outstanding stock of the Corporation;

(3) any transaction which results in the issuance or transfer by the Corporation or by any direct or indirect majority-owned subsidiary of the Corporation of any stock of the Corporation or of such subsidiary to the interested stockholder, except: (a) pursuant to the exercise, exchange or conversion of securities exercisable for, exchangeable for or convertible into stock of the Corporation or any such subsidiary which securities were outstanding prior to the time that the interested stockholder became such; (b) pursuant to a merger under Section 251(g) of the DGCL; (c) pursuant to a dividend or distribution paid or made, or the exercise, exchange or conversion of securities exercisable for, exchangeable for or convertible into stock of the Corporation subsequent to the time the interested stockholder became such; (b) pursuant to a merger under Section 251(g) of the DGCL; (c) pursuant to a dividend or distribution paid or made, or the exercise, exchange or conversion of securities exercises of stock of the Corporation subsequent to the time the interested stockholder became such; (d) pursuant to an exchangeable for or convertible into stock of the Corporation or any such subsidiary which security is distributed, pro rata to all holders of a class or series of stock of the Corporation subsequent to the time the interested stockholder became such; (d) pursuant to an exchange offer by the Corporation to purchase stock made on the same terms to all holders of said stock; or (e) any issuance or transfer of stock by the Corporation; provided, however, that in no case under items (c)-(e) of this subsection (3) shall there be an increase in the interested stockholder's proportionate share of the stock of any class or series of the Corporation or of the voting stock of the Corporation (except as a result of immaterial changes due to fractional share adjustments);

(4) any transaction involving the Corporation or any direct or indirect majority-owned subsidiary of the Corporation which has the effect, directly or indirectly, of increasing the proportionate share of the stock of any class or series, or securities convertible into the stock of any class or series, of the Corporation or of any such subsidiary which is owned by the interested stockholder, except as a result of immaterial changes due to fractional share adjustments or as a result of any purchase or redemption of any shares of stock not caused, directly or indirectly, by the interested stockholder; or

(5) any receipt by the interested stockholder of the benefit, directly or indirectly (except proportionately as a stockholder of the Corporation), of any loans, advances, guarantees, pledges, or other financial benefits (other than those expressly permitted in subsections (1)-(4) above) provided by or through the Corporation or any direct or indirect majority-owned subsidiary.

(iv) "<u>control</u>," including the terms "<u>controlled</u>," "<u>controlling</u>" and "<u>under common control with</u>", means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of a person, whether through the ownership of voting stock, by contract or otherwise. A person who is the record or beneficial owner of twenty percent (20%) or more of the outstanding voting stock of a person shall be presumed to have control of such person, in the absence of proof by a preponderance of the evidence to the contrary. Notwithstanding the foregoing, a presumption of control shall not apply where such person holds voting stock, in good faith and not for the purpose of circumventing this Article X, as an agent, bank, broker, nominee, custodian or trustee for one or more record or beneficial owners who do not individually or as a group have control of such person.

(v) "<u>interested stockholder</u>" means any person (other than the Corporation or any direct or indirect majority-owned subsidiary of the Corporation) that (i) is the owner of fifteen percent (15%) or more of the outstanding voting stock of the Corporation, or (ii) is an affiliate or associate of the Corporation and was the owner of fifteen percent (15%) or more of the outstanding voting stock of the Corporation at any time within the three (3) year period immediately prior to the date on which it is sought to be determined whether such person is an interested stockholder, and the affiliates and associates of such person; <u>provided</u>, <u>however</u>, that the term "interested stockholder" shall not include (a) the CCMP Entities, (b) the INEOS Entities, or (c) any person whose ownership of shares in excess of the fifteen percent (15%) limitation set forth herein is the result of any action taken solely by the Corporation, except as a result of further corporate action not caused, directly or indirectly, by such person. For the purpose of determining whether a person is an interested stockholder, the voting stock of the Corporation deemed to be outstanding shall include stock deemed to be owned by the person through application of the definition of "owner" below but shall not include any other unissued stock of the Corporation, which may be issuable pursuant to any agreement, arrangement or understanding, or upon exercise of conversion rights, warrants or options, or otherwise.

(vi) "owner," including the terms "own" and "owned," when used with respect to any stock, means a person that individually or with or through any of its affiliates or associates:

(1) beneficially owns such stock, directly or indirectly; or

(2) has (a) the right to acquire such stock (whether such right is exercisable immediately or only after the passage of time) pursuant to any agreement, arrangement or understanding, or upon the exercise of conversion rights, exchange rights, warrants or options, or otherwise; <u>provided</u>, <u>however</u>, that a person shall not be deemed the owner of stock tendered pursuant to a tender or exchange offer made by such person or any of such person's affiliates or associates until such tendered stock is accepted for purchase or exchange; or (b) the right to vote such stock pursuant to any agreement, arrangement or understanding; <u>provided</u>, <u>however</u>, that a person shall not be deemed the owner of any stock because of such person's right to vote such stock if the agreement, arrangement or understanding to vote such stock arises solely from a revocable proxy or consent given in response to a proxy or consent solicitation made to ten (10) or more persons; or

(3) has any agreement, arrangement or understanding for the purpose of acquiring, holding, voting (except voting pursuant to a revocable proxy or consent as described in item (b) of subsection (2) above), or disposing of such stock with any other person that beneficially owns, or whose affiliates or associates beneficially own, directly or indirectly, such stock.

(vii) "person" means any individual, general partnership, limited partnership, limited liability company, corporation, trust, business trust, joint stock company, joint venture, unincorporated association, cooperative or association or any other legal entity or organization of whatever nature, and shall include any successor (by merger or otherwise) of such entity.

(viii) "stock" means, with respect to any corporation, capital stock and, with respect to any other entity, any equity interest.

(ix) "voting stock" means stock of any class or series entitled to vote generally in the election of directors.

ARTICLE XI - EXCLUSIVE JURISDICTION FOR CERTAIN ACTIONS

(a) Exclusive Forum. Unless the Board of Directors or one of its committees otherwise approves, in accordance with Section 141 of the DGCL, this Second Restated Certificate of Incorporation and the bylaws of the Corporation, the selection of an alternate forum, the Court of Chancery of the State of Delaware (or, if the Court of Chancery of the State of Delaware does not have jurisdiction, the Superior Court of the State of Delaware, or, if the Superior Court of the State of Delaware also does not have jurisdiction, the United States District Court for the District of Delaware) shall, to the fullest extent permitted by applicable law, be the sole and exclusive forum for (i) any derivative action or proceeding brought on behalf of the Corporation, (ii) any action asserting a claim of breach of a fiduciary duty owed by any director, officer, ofther one or security holder of the Corporation to the Corporation or some or all of the DGCL, this Second Restated Certificate of Incorporation or the bylaws of the Corporation, (ii) any action asserting a claim against the Corporation arising pursuant to any provision of the DGCL, this Second Restated Certificate of Incorporation or the bylaws of the Corporation, (iv) any action asserting a claim governed by the internal affairs doctrine (each, a "Covered Proceeding").

(b) <u>Personal Jurisdiction</u>. If any action the subject matter of which is a Covered Proceeding is filed in a court other than the Court of Chancery of the State of Delaware, or, where permitted in accordance with paragraph (a) above, the Superior Court of the State of Delaware or the United States District Court for the District of Delaware (each, a "<u>Foreign Action</u>") in the name of any person or entity (a "<u>Claiming Party</u>") without the prior approval of the Board of Directors or one of its committees in the manner described in paragraph (a) above, such Claiming Party shall be deemed to have consented to (i) the personal jurisdiction of the Court of Chancery of the State of Delaware, or, where applicable, the Superior Court of the State of Delaware and the United States District Court for the District of Delaware, in connection with any action brought in any such courts to enforce paragraph (a) above (an "<u>Enforcement Action</u>") and (ii) having service of process made upon such Claiming Party in any such Enforcement Action by service upon such Claiming Party's counsel in the Foreign Action as agent for such Claiming Party.

(c) Notice and Consent. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Corporation shall be deemed to have notice of and consented to the provisions of this Article XI and waived any argument relating to the inconvenience of the forums referenced above in connection with any Covered Proceeding.

ARTICLE XII - SEVERABILITY

If any provision or provisions of this Second Restated Certificate of Incorporation shall be held to be invalid, illegal or unenforceable as applied to any circumstance for any reason whatsoever: (i) the validity, legality and enforceability of such provisions in any other circumstance and of the remaining provisions of this Second Restated Certificate of Incorporation (including, without limitation, each portion of any paragraph of this Second Restated Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable that is not itself held to be invalid, illegal or unenforceable) shall not in any way be affected or impaired thereby and (ii) to the fullest extent possible, the provisions of this Second Restated Certificate of Incorporation (including, without limitation, each portion of including, without limitation, each such portion of any paragraph of this Second Restated Certificate of Incorporation containing any such provision held to be invalid, illegal or unenforceable) shall be construed so as to permit the Corporation to protect its directors, officers, employees and agents from personal liability in respect of their good faith service to or for the benefit of the Corporation to the fullest extent permitted by law.

* * *

IN WITNESS WHEREOF, the undersigned has caused this Second Restated Certificate of Incorporation to be executed by the officer below this 28th day of September, 2017.

PQ GROUP HOLDINGS INC.

| By: | /s/ Joseph S. Koscinski |
|--------|------------------------------|
| Name: | Joseph S. Koscinski |
| Title: | Vice President and Secretary |

Signature Page to Second Restated Certificate of Incorporation

PQ Group Holdings Inc. 300 Lindenwood Drive Valleybrooke Corporate Center Malvern, Pennsylvania 19355

Ladies and Gentlemen:

This opinion letter is furnished to you in connection with the registration statement on FormS-8 (the "<u>Registration Statement</u>"), filed by PQ Group Holdings Inc., a Delaware corporation (the "<u>Company</u>"), on the date hereof, with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the <u>Securities Act</u>"), for the registration of an aggregate of 9,842,369 shares of Common Stock, \$0.01 par value, of the Company (the "<u>Shares</u>"). The Shares are issuable under the Company's 2016 Stock Incentive Plan, 2017 Omnibus Incentive Plan (each, a "<u>Plan</u>", and together, the "<u>Plans</u>").

We are familiar with the actions taken by the Company in connection with the adoption of the Plans. We have examined such certificates, documents and records and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinions set forth herein. In conducting such investigation, we have relied, without independent verification, upon certificates of officers of the Company, public officials and other appropriate persons.

The opinions expressed below are limited to the Delaware General Corporation Law.

Based upon and subject to the foregoing, we are of the opinion that the Shares have been duly authorized and, when the Shares have been issued and sold in accordance with the terms of the applicable Plan, the Shares will be validly issued, fully paid and nonassessable.

We hereby consent to the filing of this opinion letter as an exhibit to the Registration Statement. In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations thereunder.

Very truly yours,

Ropes & Gray LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on FormS-8 of our report dated June 9, 2017 except with respect to our opinion on the consolidated financial statements insofar as it relates to the Reclassification of Class A common stock and stock split described in Notes 20 and 21, as to which the date is September 25, 2017, relating to the financial statements and financial statement schedule, which appears in PQ Group Holdings Inc.'s Registration Statement on FormS-1 (No. 333-218650).

/s/ PricewaterhouseCoopers LLP Philadelphia, Pennsylvania October 2, 2017

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on FormS-8 of our report relating to the consolidated financial statements of Eco Services Operations LLC and subsidiary (accounting predecessor to PQ Group Holdings Inc.) for the period from inception (July 30, 2014) to December 31, 2014 (Successor Period) and Eco, a business unit of Solvay USA Inc., for the period from January 1, 2014 to November 30, 2014 (Predecessor Period) (which report expresses an unqualified opinion and includes an emphasis of matter paragraph referring to the "carveout" of the predecessor financial statements from Solvay USA Inc.) dated May 15, 2015, except for Note 12 and Note 20, as to which the date is June 8, 2017, appearing in the Prospectus of PQ Group Holdings Inc. dated September 28, 2017 filed pursuant to Rule 424(b) under the Securities Act of 1933, as amended.

/s/ DELOITTE & TOUCHE LLP Parsippany, New Jersey October 2, 2017

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on FormS-8 of PQ Group Holdings Inc. of our report dated March 25, 2016, relating to the financial statements of PQ Holdings Inc., which appears in PQ Group Holdings Inc.'s Registration Statement on Form S-1 (No. 333-218650).

/s/ PricewaterhouseCoopers LLP Philadelphia, Pennsylvania October 2, 2017

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on FormS-8 of PQ Group Holdings Inc. of our report dated March 21, 2017, relating to the financial statements of Zeolyst International, which appears in PQ Group Holdings Inc.'s Registration Statement on Form S-1 (No. 333-218650).

/s/ PricewaterhouseCoopers LLP Philadelphia, Pennsylvania October 2, 2017

Conversion of Class B shares

Immediately prior to PQ Group Holdings Inc.'s (the "Company") initial public offering of common stock, par value \$0.01 (the "common stock"), the Company converted each outstanding share of its Class B common stock, par value \$0.01 ("Class B"), into 8.8275 shares of its common stock, plus an additional number of shares of common stock as determined by dividing the unreturned paid-in capital amount of such share of Class B shares, or \$113.74 per share, by the initial public offering price of a share of the Company's common stock, rounded to the nearest whole share. Holders of the Class B shares did not receive any cash payments from the Company in connection with the conversion of the Class B shares.

As a result of the conversion of the Class B shares into common stock, the actual structure and historical basic and diluted earnings per share of the Company has changed. The unaudited historical basic and diluted earnings per share for the years ended December 31, 2016 and 2015, the period from inception to (July 30, 2014 to December 31, 2014 (Successor period), and for the six months ended June 30, 2017 and 2016, respectively, after giving effect to the conversion of all outstanding shares of Class B common stock at a conversion factor of 15, determined by reference to the initial public offering price of \$17.50 per share of common stock, is set forth in the following table:

| | Six Months Ended June 30, 2017 | Six Months Ended June 30, 2016 | Year Ended December 31, 2016 | Year Ended December 31, 2015 | Period from Inception (July 30, 2014 to December 31, 2014 (Successor)) |
|--|---|--------------------------------------|------------------------------------|------------------------------------|--|
| Net income (loss) available to PQ Group Holdings common shareholders | \$ (4,063) | \$ (80,393) | \$ (79,746) | \$ 11,427 | \$ (22,061) |
| Weighted average number of common shares: | | | | | |
| Weighted average number of Class B shares | 6,679,077 | 3,224,645 | 4,947,982 | 1,507,719 | 1,492,682 |
| Class B conversion factor | 15 | 15 | 15 | 15 | 15 |
| Weighted average number of converted Class B shares | 100,186,155 | 48,369,675 | 74,219,730 | 22,615,785 | 22,390,230 |
| Weighted average number of common shares | 3,795,693 | 3,797,026 | 3,796,275 | | |
| Weighted average number of common shares (unaudited) | 103,981,848 | 52,166,701 | 78,016,005 | 22,615,785 | 22,390,230 |
| Earnings per common share - basic and diluted (unaudited) | \$ (0.04) | \$ (1.54) | \$ (1.02) | \$ 0.51 | \$ (0.99) |