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

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SCHEDULE 14A

Proxy Statement Pursuant to Section 14(a) of the  
Securities Exchange Act of 1934  
(Amendment No. )

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Filed by the Registrant  Filed by a Party other than the Registrant

Check the appropriate box:

- Preliminary Proxy Statement
- Confidential, for Use of the Commission Only (as permitted by Rule 14a-6(e)(2))
- Definitive Proxy Statement
- Definitive Additional Materials
- Soliciting Material Pursuant to §240.14a-12

**PQ GROUP HOLDINGS INC.**  
(Name of Registrant as Specified In Its Charter)

(Name of Person(s) Filing Proxy Statement, if other than the Registrant)

Payment of Filing Fee (Check the appropriate box):

- No fee required.
  - Fee computed on table below per Exchange Act Rules 14a-6(i)(1) and 0-11.
    - 1) Title of each class of securities to which transaction applies: \_\_\_\_\_
    - 2) Aggregate number of securities to which transaction applies: \_\_\_\_\_
    - 3) Per unit price or other underlying value of transaction computed pursuant to Exchange Act Rule 0-11 (Set forth the amount on which the filing fee is calculated and state how it was determined): \_\_\_\_\_
    - 4) Proposed maximum aggregate value of transaction: \_\_\_\_\_
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  - Fee paid previously with preliminary materials.
  - Check box if any part of the fee is offset as provided by Exchange Act Rule 0-11(a)(2) and identify the filing for which the offsetting fee was paid previously. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.
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    - 2) Form, Schedule or Registration Statement No.: \_\_\_\_\_
    - 3) Filing Party: \_\_\_\_\_
    - 4) Date Filed: \_\_\_\_\_
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Valleybrooke Corporate Center  
300 Lindenwood Drive  
Malvern, Pennsylvania 19355-1740

March 26, 2019

Dear Stockholder:

We cordially invite you to attend our 2019 Annual Meeting of Stockholders on Thursday, May 2, 2019, at 10:00 a.m. (Eastern Time), to be held at our offices at Valleybrooke Corporate Center, 300 Lindenwood Drive, Malvern, Pennsylvania 19355.

The proxy statement accompanying this letter describes the business we will consider at the annual meeting. Your vote is important regardless of the number of shares you own. Whether or not you plan to attend the annual meeting, we encourage you to consider the matters presented in the proxy statement and vote as soon as possible. Instructions for Internet and telephone voting are attached to your proxy card. If you prefer, you can vote by mail by completing and signing your proxy card and returning it in the enclosed envelope.

We hope that you will be able to join us on May 2<sup>nd</sup>.

Sincerely,

A handwritten signature in black ink, appearing to read "Belgacem Chariag".

**Belgacem Chariag**  
President and Chief Executive Officer





Valleybrooke Corporate Center  
300 Lindenwood Drive  
Malvern, Pennsylvania 19355-1740

## NOTICE OF ANNUAL MEETING OF STOCKHOLDERS

The 2019 Annual Meeting of Stockholders (the "Annual Meeting") of PQ Group Holdings Inc. (the "Company") will be held at our offices at Valleybrooke Corporate Center, 300 Lindenwood Drive, Malvern, Pennsylvania 19355 on Thursday, May 2, 2019, at 10:00 a.m. (Eastern Time) for the following purposes as further described in the proxy statement accompanying this notice:

- To elect the four Class II director nominees specifically named in the proxy statement, each to serve for a term of three years.
- To hold an advisory vote on the compensation paid by the Company to its named executive officers (the "say-on-pay proposal").
- To ratify the appointment of PricewaterhouseCoopers LLP as the independent registered public accounting firm of the Company for the fiscal year ending December 31, 2019.
- To consider any other business properly brought before the Annual Meeting.

Stockholders of record at the close of business on March 18, 2019 are entitled to notice of, and entitled to vote at, the Annual Meeting and any adjournments or postponements thereof.

To attend the Annual Meeting, you must demonstrate that you were a PQ stockholder as of the close of business on March 18, 2019, or hold a valid proxy for the Annual Meeting from such a stockholder. The proxy card includes an admission ticket to attend the Annual Meeting. You may alternatively present a brokerage statement showing proof of your ownership of PQ stock as of March 18, 2019. **All stockholders must also present a valid form of government-issued picture identification in order to attend.** Please allow additional time for these procedures.

By Order of the Board of Directors,

A handwritten signature in black ink, appearing to read 'JK', is written over a horizontal line.

**Joseph S. Koscinski**  
Secretary

Malvern, Pennsylvania  
March 26, 2019



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PQ GROUP HOLDINGS INC.  
PROXY STATEMENT  
2019 ANNUAL MEETING OF STOCKHOLDERS  
May 2, 2019  
10:00 a.m. (Eastern Time)  
INTRODUCTION

This Proxy Statement provides information for stockholders of PQ Group Holdings Inc. (“we,” “us,” “our,” “PQ” and the “Company”), as part of the solicitation of proxies by the Company and its board of directors (the “Board”) from holders of the outstanding shares of the Company’s common stock, par value \$0.01 per share (“Common Stock”), for use at the Company’s annual meeting of stockholders to be held at our offices at Valleybrooke Corporate Center, 300 Lindenwood Drive, Malvern, Pennsylvania 19355 on Thursday, May 2, 2019 at 10:00 a.m. (Eastern Time), and at any adjournments or postponements thereof (the “Annual Meeting”).

At the Annual Meeting, stockholders will be asked to vote either directly or by proxy on the following matters discussed herein:

1. To elect the four Class II director nominees specifically named in this Proxy Statement, each to serve for a term of three years (Proposal 1).
2. To hold an advisory vote on the compensation paid by the Company to its named executive officers (the “say-on-pay proposal”) (Proposal 2).
3. To ratify the appointment of PricewaterhouseCoopers LLP as the independent registered public accounting firm of the Company for the fiscal year ending December 31, 2019 (Proposal 3).
4. To consider any other business properly brought before the Annual Meeting.

This Proxy Statement, the proxy card and the Annual Report to stockholders for the fiscal year ended December 31, 2018 are being first mailed to stockholders on or about March 26, 2019.

**IMPORTANT NOTICE REGARDING THE AVAILABILITY OF PROXY MATERIALS FOR THE ANNUAL MEETING TO BE HELD ON MAY 2, 2019: THIS PROXY STATEMENT, THE ANNUAL REPORT AND THE FORM 10-K FOR FISCAL 2018 ARE AVAILABLE AT [WWW.PROXYVOTE.COM](http://WWW.PROXYVOTE.COM).**



## INFORMATION ABOUT THE ANNUAL MEETING AND VOTING

Although we encourage you to read this Proxy Statement in its entirety, we include this Q&A section to provide some background information and brief answers to several questions you might have about the Annual Meeting.

### **Why are we providing these materials?**

Our Board is providing these materials to you in connection with our Annual Meeting, which will take place on May 2, 2019 at our offices at Valleybrooke Corporate Center, 300 Lindenwood Drive, Malvern, Pennsylvania 19355 at 10:00 a.m. (Eastern Time). Stockholders are invited to participate in the Annual Meeting and are requested to vote on the proposals described herein.

### **What information is contained in this Proxy Statement?**

This Proxy Statement contains information relating to the proposals to be voted on at the Annual Meeting, the voting process, the compensation of our directors and most highly paid officers, and other required information.

### **What proposals will be voted on at the Annual Meeting?**

There are three proposals scheduled to be voted on at the Annual Meeting:

- the election of the four Class II director nominees specifically named in this Proxy Statement, each to serve for a term of three years;
- an advisory vote on the say-on-pay proposal; and
- the ratification of PricewaterhouseCoopers LLP as the independent registered public accounting firm of the Company for the fiscal year ending December 31, 2019.

We will also consider other business properly brought before the Annual Meeting.

### **What shares can I vote?**

You may vote all shares of Common Stock that you owned as of the close of business on the record date, March 18, 2019. You may cast one vote per share, including shares (i) held directly in your name as the stockholder of record and (ii) held for you as the beneficial owner through a broker, bank, or other nominee. The proxy card will indicate the number of shares that you are entitled to vote.

As of March 18, 2019, there were 135,727,810 shares of Common Stock outstanding, all of which are entitled to be voted at the Annual Meeting.

A list of stockholders will be available at our headquarters at Valleybrooke Corporate Center, 300 Lindenwood Drive, Malvern, Pennsylvania 19355 for a period of at least ten days prior to the Annual Meeting and at the Annual Meeting for examination by any stockholder.

### **What is the difference between being a stockholder of record and a beneficial owner of shares held in street name?**

Many of our stockholders hold their shares through brokers, banks, or other nominees, rather than directly in their own names. As summarized below, there are some differences between being a stockholder of record and a beneficial owner of shares held in street name.

**Stockholder of record:** If your shares are registered directly in your name with PQ's transfer agent, American Stock Transfer and Trust Company, LLC, you are the stockholder of record with respect to those shares and the proxy materials were sent directly to you. As the stockholder of record, you have the right to grant your voting proxy directly to the individuals named on the proxy card and to vote at the Annual Meeting.

**Beneficial owner of shares held in street name:** If your shares are held in a brokerage account or by a bank or other nominee, then you are the "beneficial owner of shares held in street name" and the proxy materials were forwarded to you by your broker, bank or other nominee, who is considered to be the stockholder of record. As a beneficial owner, you have the right to instruct the broker, bank or other nominee holding your shares how to vote your shares.

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### **How do I vote?**

There are four ways to vote:

- **In Person.** You may vote in person at the Annual Meeting by requesting a ballot from an usher. If you are a beneficial owner of shares held in street name and wish to vote in person at the Annual Meeting, you must obtain a "legal proxy" from the broker, bank or other nominee that holds your shares. A legal proxy is a written document that authorizes you to vote your shares held in street name at the Annual Meeting. Please contact the broker, bank or other nominee that holds your shares for instructions regarding obtaining a legal proxy. You must bring a copy of the legal proxy to the Annual Meeting. In order for your vote to be counted, you must hand both the copy of the legal proxy and your completed ballot to an usher to be provided to the inspector of election.
- **Online.** You may vote by proxy by visiting [www.proxyvote.com](http://www.proxyvote.com) and entering the control number found on your proxy card. The availability of online voting may depend on the voting procedures of the broker, bank or other nominee that holds your shares.
- **Phone.** You may vote by proxy by calling the toll free number found on your proxy card. The availability of phone voting may depend on the voting procedures of the broker, bank or other nominee that holds your shares.
- **Mail.** You may vote by proxy by filling out your proxy card and returning it in the envelope provided.

All shares represented by valid proxies received prior to the taking of the vote at the Annual Meeting will be voted and, where a stockholder specifies by means of the proxy a choice with respect to any matter to be acted upon, the shares will be voted in accordance with the stockholder's instructions. Even if you plan on attending the Annual Meeting in person, we encourage you to vote your shares in advance online, by phone, or by mail to ensure that your vote will be represented at the Annual Meeting.

### **Can I change my vote or revoke my proxy?**

You may revoke your proxy and change your vote at any time before the taking of the vote at the Annual Meeting.

- **In Person.** You may revoke your proxy and change your vote by attending the Annual Meeting and voting in person. However, your attendance at the Annual Meeting will not automatically revoke your proxy unless you properly vote at the Annual Meeting or specifically request that your prior proxy be revoked by delivering a written notice of revocation prior to the Annual Meeting to PQ's Secretary at 300 Lindenwood Drive, Malvern, Pennsylvania 19355.
- **Online.** You may change your vote using the online voting method described above, in which case only your latest internet proxy submitted prior to the Annual Meeting will be counted.
- **Phone.** You may change your vote using the phone voting method described above, in which case only your latest telephone proxy submitted prior to the Annual Meeting will be counted.
- **Mail.** You may revoke your proxy and change your vote by signing and returning a new proxy card dated as of a later date in which case only your latest proxy card received prior to the Annual Meeting will be counted.

### **What happens if I do not instruct how my shares should be voted?**

**Stockholders of record.** If you are a stockholder of record and you:

- indicate when voting online or by phone that you wish to vote as recommended by the Board; or
- sign and return a proxy card without giving specific instructions,

then the persons named as proxy holders, Joseph S. Kosciński and William J. Sichko, Jr., will vote your shares in the manner recommended by the Board on all matters presented in this Proxy Statement and as they may determine in their best judgment with respect to any other matters properly presented for a vote at the Annual Meeting.

**Beneficial owners of shares held in street name.** If you are a beneficial owner of shares held in street name and do not provide the broker, bank or other nominee that holds your shares with specific voting instructions, then the broker, bank or other nominee that holds your shares may generally vote your shares in their discretion on "routine" matters, but cannot vote on "non-routine" matters.

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### **What are routine and non-routine proposals?**

The following proposal is considered a routine matter:

- The ratification of the appointment of PricewaterhouseCoopers LLP as the independent registered public accounting firm of the Company for the fiscal year ending December 31, 2019 (Proposal 3).

A broker, bank or other nominee may generally vote in their discretion on routine matters, and therefore no broker non-votes are expected in connection with Proposal 3.

The following proposals are considered non-routine matters:

- Election of directors (Proposal 1); and
- Advisory vote on the say-on-pay proposal (Proposal 2).

If the broker, bank or other nominee that holds your shares does not receive instructions from you on how to vote your shares on a non-routine matter, that broker, bank or other nominee will inform the inspector of election that it does not have the authority to vote on the matter with respect to your shares. This is generally referred to as a "broker non-vote." Therefore, broker non-votes may exist in connection with Proposals 1 and 2.

### **What constitutes a quorum for the Annual Meeting?**

The presence at the meeting, in person or by proxy, of the holders of Common Stock representing a majority of the shares outstanding and entitled to vote for the election of directors is necessary to constitute a quorum for all purposes.

### **What vote is required to approve each proposal?**

**Proposal 1: Election of directors.** Directors are elected by a plurality of the votes cast. Therefore, if you do not vote for a nominee, or you "withhold authority to vote" for a nominee, your vote will not count either "for" or "against" the nominee.

**Proposal 2: Advisory vote on the say-on-pay proposal.** Generally, approval of any matter presented to stockholders (other than the election of directors) requires the affirmative vote of a majority of the votes cast on the matter. However, because this proposal asks for a non-binding, advisory vote, there is no "required" vote that would constitute approval.

**Proposal 3: Ratification of PwC.** The affirmative vote of a majority of the votes cast is required to ratify the selection of PricewaterhouseCoopers LLP as the independent registered public accounting firm of the Company for the fiscal year ending December 31, 2019.

### **What effect will broker non-votes and abstentions have?**

Broker non-votes and abstentions are counted as present and entitled to vote for purposes of determining whether a quorum is present. Broker non-votes and abstentions will have no effect on the outcome of each proposal.

### **Who pays for costs relating to the proxy materials and Annual Meeting?**

The costs of preparing, assembling and mailing this Proxy Statement, the proxy card and the Annual Report, along with the cost of posting the proxy materials on a website, are to be borne by us. In addition to the use of mail, our directors, officers and employees may solicit proxies personally and by telephone, facsimile and other electronic means. They will receive no compensation in addition to their regular salaries. We may request banks, brokers and other custodians, nominees and fiduciaries to forward copies of the proxy materials to their principals and to request authority for the execution of proxies. We may reimburse these persons for their expenses in doing so.

### **Who should I call if I have any questions?**

If you have any questions about the Annual Meeting, voting or your ownership of our Common Stock, please call us at (610) 651-4216 or send an email to [PQGIR@pqcorp.com](mailto:PQGIR@pqcorp.com).



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## BOARD OF DIRECTORS

### PROPOSAL 1

### ELECTION OF DIRECTORS

PQ has a classified Board currently consisting of four directors with terms expiring in 2019 (Class II), three directors with terms expiring in 2020 (Class III), and four directors with terms expiring in 2021 (Class I). At each annual meeting of stockholders, directors in one class are elected for a full term of three years to succeed those directors whose terms are expiring. Robert Coxon, Mark McFadden, Kimberly Ross and Robert Toth are the Class II directors whose terms expire at the Annual Meeting. Our Board has nominated, and stockholders are being asked to re-elect, Ms. Ross and Messrs. Coxon, McFadden and Toth for three-year terms expiring at our 2022 annual meeting of stockholders. If elected, the nominees will each hold office until our 2022 annual meeting of stockholders and a successor is duly elected and qualified or until earlier death, resignation, or removal.

Each of the above nominees has indicated his or her willingness to serve, if elected. However, if a nominee should be unable to serve, the shares of Common Stock represented by proxies may be voted for a substitute nominee designated by the Board. Management has no reason to believe that any of the above-mentioned persons will not serve his or her term as a director.

All of our nominees have served previously on our Board, which has provided them with significant exposure to both our business and the industry in which we compete. We believe that all our nominees possess the professional and personal qualifications necessary for board service, and we have highlighted particularly noteworthy attributes for each director in the individual biographies below.

**The Board recommends a vote FOR the election of each of the director nominees.**

The following table sets forth the name, age, and position, as of March 1, 2019, of individuals who currently serve as directors on our Board.

Name	Age	Position	Class
Belgacem Chariag	56	Director, President and CEO	Class I
Greg Brenneman	57	Director	Class I
Jonny Ginns	45	Director	Class I
Kyle Vann	71	Director	Class I
Robert Coxon	71	Director	Class II
Mark McFadden	41	Director	Class II
Kimberly Ross	53	Director	Class II
Robert Toth	58	Director	Class II
Martin Craighead	59	Director	Class III
Andrew Currie	63	Director	Class III
Timothy Walsh	55	Lead Independent Director	Class III

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## Class II – Directors with Terms Expiring in 2019



### ROBERT COXON

Age: 71  
Independent Director

**Robert Coxon** has served on our Board since 2007. Mr. Coxon was previously a Senior Advisor to The Carlyle Group, assisting buyout teams in Europe, the United States, the Middle East and Asia until 2013. In that role, he advised Carlyle in making and managing investments in the chemicals sector and was based in London. Prior to joining Carlyle, Mr. Coxon was the Senior Vice President of ICI and the Chief Executive Officer of Syntex, a leading global catalyst company. From 2003 until 2017, Mr. Coxon served as the Chairman of the UK Center for Process Innovation, an international research center in printable electronics, bio-processing and low carbon energy. Mr. Coxon previously served on the board of directors of AZ Electronic Materials SA, Jiangsu Sinorgchem Technology Co., Ltd., Ensus Ltd. and Stahl Holdings BV. Because of his extensive experience in the chemicals sector, we believe Mr. Coxon is well qualified to serve on our Board.



### MARK MCFADDEN

Age: 41  
Independent Director

**Mark McFadden** has served on our Board since 2016. Mr. McFadden is a Managing Director of CCMP Capital Advisors, LP ("CCMP") and focuses on making investments in the industrial sector. Prior to joining CCMP upon its formation in August 2006, Mr. McFadden was with J.P. Morgan Partners, LLC between 2002 and 2006. Prior to that, Mr. McFadden was an investment banking analyst at Credit Suisse First Boston and Bowles Hollowell Conner. From 2012 until 2018, Mr. McFadden served on the board of Milacron Holdings Corp. Because of his extensive experience in the industrial sector and his significant experience in, and knowledge of, corporate finance and strategic development, we believe Mr. McFadden is well qualified to serve on our Board.



### KIMBERLY ROSS

Age: 53  
Independent Director

**Kimberly Ross** has served on our Board since 2017. Ms. Ross served as the Senior Vice President and Chief Financial Officer of Baker Hughes Incorporated, a supplier of oilfield services from 2014 to 2017. Prior to joining Baker Hughes Incorporated in November 2014, Ms. Ross served as the Executive Vice President and Chief Financial Officer of Avon Products Incorporated, a manufacturer of beauty products, from 2011 to 2014. Prior to joining Avon Products, Ms. Ross was an Executive Vice President and the Chief Financial Officer of Royal Ahold N.V., a food retailer, from 2007 to 2011 and held various other finance positions with Royal Ahold N.V. from 2001 to 2007. Ms. Ross also serves on the boards of directors and the audit committees of Chubb Limited and Nestle S.A. Because of her extensive financial expertise and experience, we believe Ms. Ross is well qualified to serve on our Board.

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**ROBERT TOTH**  
Age: 58  
Independent Director

**Robert Toth** has served on our Board since 2016. Mr. Toth is a Managing Director of CCMP. Prior to joining CCMP in 2016, Mr. Toth served as the Chief Executive Officer and President of Polypore International, Inc., a leading global high technology filtration company specializing in microporous membranes, since 2005, during which time Polypore transitioned from a private to a public company via a successful IPO in 2007 and was ultimately acquired in 2015. Mr. Toth was previously the President and Chief Executive Officer and a member of the board of directors of CP Kelco ApS, a global leader in the specialty hydrocolloids market. Prior to joining CP Kelco in 2001, Mr. Toth spent 19 years at Monsanto Company and Solutia Inc. where he held a variety of managerial and executive roles. Mr. Toth currently serves on the board of directors of Materion Corporation and SPX Corporation. Mr. Toth previously served on the board of directors of Polypore International, Inc. from 2005 until 2015. Because of his extensive leadership experience and past service as a public company director, we believe Mr. Toth is well qualified to serve on our Board.

Class III – Directors with Terms Expiring in 2020



**MARTIN CRAIGHEAD**  
Age: 59  
Independent Director

**Martin Craighead** has served on our Board since 2017. Mr. Craighead served as the Chief Executive Officer of Baker Hughes Incorporated, a supplier of oilfield services, from 2012 to 2017. He has also served as Chairman of the board of directors of Baker Hughes Incorporated from 2013 to 2017 and was a member of their board of directors from 2011 until 2017. Mr. Craighead currently serves on the boards of directors of Baker Hughes, a GE company, following the combination of Baker Hughes with GE’s oil and gas business, and of Texas Instruments Inc. He first joined Baker Hughes Incorporated in 1986 and was its Chief Operating Officer from 2009 to 2012 and Group President of drilling and evaluation from 2007 to 2009. He also served as President of INTEQ from 2005 to 2007 and President of Baker Atlas from February 2005 to August 2005. Because of his industry expertise in the energy sector and extensive management experience, we believe Mr. Craighead is well qualified to serve on our Board.

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**ANDREW CURRIE**  
Age: 63  
Independent Director

**Andrew Currie** has served on our Board since 2008. Mr. Currie has been a director of INEOS Group, an affiliate of INEOS Investments Partnership (“INEOS”), since 1999, a partner of INEOS since 2000 and a director of INEOS AG since March 2010 when the ownership of the INEOS business was transferred to Switzerland. He was previously a Managing Director of Laporte Performance Chemicals, having served as a director of the Inspec Group from 1994 until the Laporte acquisition of Inspec in 1998. Mr. Currie spent the first 15 years of his career with BP Chemicals in various technical and business management functions. Because of his experience in the chemicals sector and his significant core business skills, including financial and strategic planning, we believe Mr. Currie is well qualified to serve on our Board.



**TIMOTHY WALSH**  
Age: 55  
Lead Independent Director

**Timothy Walsh** has served on our Board since 2014. Mr. Walsh is the President and Chief Executive Officer of CCMP and is a member of the firm’s Investment Committee. Mr. Walsh focuses on making investments in the industrial sector. Prior to joining CCMP upon its formation in August 2006, Mr. Walsh was with J.P. Morgan Partners, LLC and its predecessors from 1993 until 2006. Prior to that, Mr. Walsh worked on various industry-focused client teams within The Chase Manhattan Corporation. Mr. Walsh currently serves on the board of directors of Milacron Holdings Corp. and previously served as a member of the board of directors of Generac Holdings Inc. from 2006 until 2016. Because of his knowledge of the industrial sector and his extensive experience in business and finance, we believe Mr. Walsh is well qualified to serve on our Board.

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## Class I – Directors with Terms Expiring in 2021



### GREG BRENNEMAN

Age: 57

Independent Director

**Greg Brenneman** has served on our Board since 2014. Mr. Brenneman is the Executive Chairman of CCMP and is a member of the firm's Investment Committee. Prior to joining CCMP in October 2008, Mr. Brenneman served as the Chief Executive Officer of QCE Holdings LLC ("Quiznos"), a U.S. quick service restaurant chain, from January 2007 until September 2008 and as the President of Quiznos from January 2007 until November 2007. He also served as the Executive Chairman from 2008 to 2009. Prior to joining Quiznos, Mr. Brenneman was the Chairman and Chief Executive Officer of Burger King Corporation from 2004 to 2006. Prior to joining Burger King, Mr. Brenneman was named the President and Chief Executive Officer of PwC Consulting in June 2002. Mr. Brenneman joined Continental Airlines in 1995 as the President and Chief Operating Officer and as a member of its board of directors. In 1994, Mr. Brenneman founded Turnworks, Inc., his personal investment firm that focuses on corporate turnarounds. Prior to founding Turnworks, Mr. Brenneman was a Vice President for Bain and Company. Mr. Brenneman currently serves on the board of directors of The Home Depot, Inc. and Baker Hughes, a GE Company. Mr. Brenneman previously served on the board of directors of Milacron Holdings Corp. from 2012 until 2017, Automatic Data Processing, Inc. from 2001 until 2014 and Francesca's Holding Corporation from 2010 until 2015. Because of his leadership experience, over 20 years of business experience and extensive experience serving as a public company director, we believe Mr. Brenneman is well qualified to serve on our Board.



### JONNY GINNS

Age: 45

Independent Director

**Jonny Ginns** has served on our Board since 2010. Mr. Ginns joined INEOS in 2006 as the Group General Counsel, having worked as an external lawyer for a number of years before that. He has experience across a wide range of fields, including mergers & acquisitions, disposals, joint ventures, litigation, finance and employee benefits, and acts as a director for a number of INEOS entities. Because of his significant core business skills, including financial and strategic planning, we believe Mr. Ginns is well qualified to serve on our Board.



### KYLE VANN

Age: 71

Independent Director

**Kyle Vann** has served on our Board since 2014. Mr. Vann is an Executive Advisor to CCMP since October 2012 and has provided consulting services to Entergy Corporation since 2005. He served for 25 years in various senior leadership positions at Koch Industries including as the Chief Executive Officer of Entergy-Koch LP, a joint venture between Koch Industries and Entergy Corporation. Before joining Koch Industries, Mr. Vann worked at Humble Oil and Refining Company (which later became part of Exxon) as a refinery engineer. Mr. Vann currently serves on the board of directors of EnLink Midstream, LLC and Legacy Reserves LP. From 2006 to 2019, he served on the board of EnLink Midstream Partners LP. Because of his extensive experience in exploration and production, midstream, energy services and trading, we believe Mr. Vann is well qualified to serve on our Board.

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**BELGACEM CHARIAG**

Age: 56

Director, President and Chief Executive Officer

**Belgacem Chariag** became a director and our President and Chief Executive Officer in August 2018. He most recently served as Chief Global Operations Officer at Baker Hughes, a GE Company, where he headed the operations of the global entity after Baker Hughes' merger with GE Oil & Gas, until January 2018. Prior to that, Mr. Chariag served as President, Global Operations as well as President, Global Products and Services for Baker Hughes. He also previously served as President of Baker Hughes Eastern Hemisphere Operations.

Prior to joining Baker Hughes in 2009, and for 20 years, Mr. Chariag held a variety of leadership and management roles for Schlumberger, including serving as Vice President of Health, Safety, Environment, and Security. Mr. Chariag was elected to serve as a member of the Board due to his extensive management and leadership experience.

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## DIRECTOR COMPENSATION

### Director Compensation

In connection with our initial public offering in 2017, we adopted a non-employee director compensation policy setting forth the compensation of our independent non-employee directors effective beginning immediately following our initial public offering. Pursuant to such policy, each of our non-employee directors who is not an employee of CCMP or INEOS is compensated as follows:

- Each eligible non-employee director receives an annual cash retainer of \$50,000.
- The chairperson of the audit committee receives an additional annual cash retainer of \$20,000.
- The chairperson of each other committee, to the extent eligible for compensation under the policy, receives an additional annual cash retainer of \$15,000.
- Each eligible non-employee director receives an annual equity grant in the form of restricted stock units with a grant date fair value of \$200,000. The terms of each such award are set forth in an award agreement between each director and us, which generally provides for vesting after one year of continued service as a director or upon an earlier occurrence of a change in control.

All cash and equity awards granted under the non-employee director compensation policy are granted under, and subject to the limits of, the PQ Group Holdings Inc. 2017 Omnibus Incentive Plan (the "2017 Plan"). Annual retainers are paid quarterly in arrears.

In 2018 we did not pay any additional remuneration for director service to any of our directors who were either our officers or who were employees of CCMP or INEOS. However, all directors were reimbursed for reasonable travel and lodging expenses incurred to attend meetings of our Board or committees thereof.

On May 15, 2018, the Company granted to each of Ms. Ross, and Messrs. Coxon, Craighead and Vann, 14,440 restricted stock units. Each award vests subject to the continued service of the director through May 14, 2019 (or upon an earlier occurrence of a change in control).

### Stock Ownership Guidelines for Non-Employee Directors

In connection with our initial public offering, the Compensation Committee adopted stock ownership guidelines applicable to our executive officers and our non-employee directors. Under our stock ownership guidelines, each of our non-employee directors is expected to have ownership of Company stock in an amount equal to at least \$625,000. Non-employee directors subject to the guidelines will have five years to achieve the required ownership levels and, until they satisfy their ownership requirements, will be subject to a holding requirement with respect to 50% of the shares they acquire upon the vesting or exercise of equity-based awards (on an after-tax basis). Non-employee directors who do not receive compensation for their service on the Board are not subject to these guidelines.

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The following table summarizes the ownership of our Common Stock as of December 31, 2018 by our non-employee directors:

Name	Ownership Requirement	Ownership relative to Requirement (1)
Robert Coxon	\$ 625,000	1.89x
Martin S. Craighead	\$ 625,000	1.08x
Kimberly Ross	\$ 625,000	.66x
Kyle Vann	\$ 625,000	2.55x

(1) In accordance with our stock ownership guidelines, ownership amounts have been determined based on a share price of \$15.32, which is the average closing price of our Common Stock on the New York Stock Exchange over the 90-day trading period prior to December 31, 2018.

**Director Compensation Table**

The following table sets forth certain information with respect to cash compensation and stock awards granted to our non-employee directors in 2018. Directors who are employees of CCMP or INEOS do not receive compensation. Neither Mr. Chariag nor Mr. Gentilcore received compensation in respect of their service on our Board. The compensation that they received in their capacities as executive officers of the Company is reported in the Summary Compensation Table below.

Name	Fees Earned or Paid in Cash (\$)(1)	Stock Awards (\$)(2)(3)	Non-Equity Incentive Plan Compensation (\$)	All Other Compensation (\$)	Total (\$)
Greg Brenneman	—	—	—	—	—
Robert Coxon	65,000	199,994	—	—	264,994
Martin S. Craighead	50,000	199,994	—	—	249,994
Andy Currie	—	—	—	—	—
Jonny Ginns	—	—	—	—	—
Mark McFadden	—	—	—	—	—
Kimberly Ross	70,000	199,994	—	—	269,994
Robert Toth	—	—	—	—	—
Kyle Vann	50,000	199,994	—	—	249,994
Timothy Walsh	—	—	—	—	—

(1) Mr. Coxon and Ms. Ross received an additional annual retainer for their services as committee chairs. Mr. Coxon served as the chair of the Health, Safety and Environment Committee, and Ms. Ross served as chair of the Audit Committee.

(2) As required by SEC rules, amounts shown present the aggregate grant date fair value of restricted stock unit awards granted to our non-employee directors during 2018, calculated in accordance with FASB ASC Topic 718, excluding the effect of any estimated forfeitures. For information on the valuation assumptions made in the calculation of these amounts, refer to Note 22 to the audited consolidated financial statements in our Form 10-K for the fiscal year ended December 31, 2018.

(3) As of December 31, 2018, Mr. Coxon held 25,476 outstanding unvested restricted shares; and the following directors held outstanding unvested restricted stock units: Mr. Coxon, 14,440, Mr. Craighead, 14,440, Ms. Ross, 14,440 and Mr. Vann, 14,440.



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## CORPORATE GOVERNANCE

### Board Meetings and Executive Sessions

Our Board and its committees meet periodically throughout the year, as needed, to oversee management of the Company's business and affairs for the benefit of its stockholders. During 2018, our Board held six meetings and also approved certain actions by unanimous written consent. During 2018, each director attended at least 75% of the Board meetings and the total meetings held by all of the committees on which he or she served during the periods that he or she served. We encourage, but do not require, our directors to attend annual meetings of stockholders.

Periodically throughout the year, the non-employee and independent directors meet in executive session without members of management present. These meetings allow such directors to discuss issues of importance to the Company, including the business and affairs of the Company and matters concerning management, without any member of management present. The Board has selected Timothy Walsh as Lead Independent Director to preside at all meetings of non-employee/independent directors.

### Committees and Committee Composition

During fiscal 2018, the Board had four standing committees: the Audit Committee, the Compensation Committee, the Nominating and Corporate Governance Committee, and the Health, Safety and Environment Committee. The members of each committee are appointed by the Board and serve until their successor is elected and qualified, unless they are earlier removed or resign. In addition, from time to time, special committees may be established under the direction of the Board when necessary to address specific issues. The table below provides information about the membership of these committees during fiscal 2018:

Name	Audit	Compensation	Nominating and Corporate Governance	Health, Safety and Environment
Kimberly Ross	*			
Mark McFadden <sup>(1)</sup>	X			
Jonny Ginns				X
Timothy Walsh		*		
Andrew Currie		X	X	
Greg Brenneman			*	
Martin Craighead			X	X
Kyle Vann <sup>(1)(2)</sup>	X	X		
Robert Coxon	X			*
Robert Toth				X
<b>Number of meetings during fiscal 2018</b>	5	3	1	3

\* Committee Chairperson

(1) Mr. McFadden served on the Audit Committee until September 2018. At that time, Mr. Vann joined the committee.

(2) Mr. Vann joined the Compensation Committee in February 2018.

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**Audit Committee** — The Audit Committee’s purpose, roles and responsibilities are set forth in a written charter adopted by our Board, which can be found in the Investors section of our website at [www.pqcorp.com](http://www.pqcorp.com) under “Corporate Governance.” The Audit Committee’s primary duties and responsibilities are to:

- appoint or replace, compensate and oversee the outside auditors, who will report directly to the Audit Committee, for the purpose of preparing or issuing an audit report or related work or performing other audit, review or attest services for us;
- pre-approve all auditing services and permitted non-audit services (including the fees and terms thereof) to be performed for us by our outside auditors, subject to de minimis exceptions that are approved by the Audit Committee prior to the completion of the audit;
- review and discuss with management and the outside auditors the annual audited and quarterly unaudited financial statements, our disclosures under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the selection, application and disclosure of critical accounting policies and practices used in such financial statements; and
- discuss with management and the outside auditors any significant financial reporting issues and judgments made in connection with the preparation of our financial statements, including any significant changes in our selection or application of accounting principles, any major issues as to the adequacy of our internal controls and any special steps adopted in light of material control deficiencies.

The Audit Committee currently consists of Kimberly Ross, Robert Coxon and Kyle Vann, with Ms. Ross serving as chairperson of the committee. Our Board has determined that Ms. Ross and Messrs. Coxon and Vann each meet the independence requirements of Rule 10A-3 under the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and the governance and listing standards of the New York Stock Exchange. All of the members of the Audit Committee are financially literate and Ms. Ross is also considered an “audit committee financial expert” within the meaning of the applicable rules of the Securities and Exchange Commission.

**Compensation Committee** — The purpose of the Compensation Committee is to assist the Board in fulfilling its responsibilities relating to oversight of the compensation of our directors, executive officers and other employees and the administration of our benefits and equity-based compensation programs. The Compensation Committee reviews and recommends to our Board compensation plans, policies and programs and approves specific compensation levels for all executive officers. The Compensation Committee currently consists of Timothy Walsh, Andrew Currie and Kyle Vann, with Mr. Walsh serving as the chairperson of the committee. Our Board has determined that each member of the Compensation Committee meets the independence requirements under the governance and listing standards of the New York Stock Exchange and are “outside directors” pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended. The Compensation Committee’s purpose, roles and responsibilities are set forth in a written charter adopted by our Board, which can be found in the Investors section of our website at [www.pqcorp.com](http://www.pqcorp.com) under “Corporate Governance.”

**Nominating and Corporate Governance Committee** — The purpose of the Nominating and Corporate Governance Committee is to identify individuals qualified to become members of the Board, recommend to the Board director nominees for the next annual meeting of stockholders, develop and recommend to the Board a set of corporate governance principles applicable to the Company, oversee the evaluation of the Board and its dealings with management as well as appropriate committees of the Board and review and approve all related party transactions. The Nominating and Corporate Governance Committee currently consists of Greg Brenneman, Andrew Currie and Martin Craighead, with Mr. Brenneman serving as the chairperson of the committee. Our Board has determined that each member of the Nominating and Corporate Governance Committee is independent as defined under the governance and listing standards of the New York Stock Exchange. The Nominating and Corporate Governance Committee’s purpose, roles and responsibilities are set forth in a written charter adopted by our Board, which can be found in the Investors section of our website at [www.pqcorp.com](http://www.pqcorp.com) under “Corporate Governance.”

**Health, Safety and Environment Committee** — The purpose of the Health, Safety and Environment Committee is to assist the Board in fulfilling its responsibilities to provide global oversight of the Company’s health, safety, environment, sustainability and security policies, processes and initiatives. The Health, Safety and Environment Committee currently consists of

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Robert Coxon, Jonny Ginns, Martin Craighead and Robert Toth, with Mr. Coxon serving as chairperson of the committee. The Health Safety and Environment Committee’s purpose, roles and responsibilities are set forth in a written charter adopted by our Board, which can be found in the Investors section of our website at [www.pqcorp.com](http://www.pqcorp.com) under “Corporate Governance.”

**Compensation Committee Interlocks and Insider Participation**

None of our executive officers serves as a member of the board of directors or compensation committee, or other committee serving an equivalent function, of any other entity that has one or more of its executive officers serving as a member of our Board or Compensation Committee. Mr. Walsh is employed by CCMP and Mr. Currie is employed by INEOS. For additional information regarding transactions between CCMP and its affiliates and us and between INEOS and its affiliates and us, see “Transactions with Related Persons.”

**Our Board’s Role in Risk Oversight**

It is management’s responsibility to manage risk and bring to the Board’s attention risks that are material to PQ. The Board has oversight responsibility for the systems established to report and monitor the most significant risks applicable to PQ. The Board believes that evaluating the executive team’s management of the various risks confronting PQ is one of its most important areas of oversight.

In accordance with this responsibility, the Board administers its risk oversight role directly and through its committee structure and the committees’ regular reports to the Board at Board meetings. The Board reviews strategic, financial and execution risks and exposures associated with the annual plan and long-term plans, major litigation and other matters that may present material risk to the Company’s operations, plans, prospects or the Company’s reputation, acquisitions and divestitures, senior management succession planning and enterprise risk management. The Audit Committee oversees the Company’s internal audit function and reviews risks associated with financial and accounting matters, including financial reporting, accounting, disclosure, internal controls over financial reporting, ethics and compliance programs, and regulatory compliance. The Audit Committee also oversees and reviews with management the Company’s cybersecurity policies, procedures and programs, including hardware and software improvements, to mitigate the risk of cyber-related threats. The Compensation Committee reviews risks related to executive compensation and the design of compensation programs, plans and arrangements.

**Board Independence**

Our Corporate Governance Guidelines provide that our Board shall consist of such number of directors who are independent as is required and determined in accordance with applicable laws and regulations and requirements of the New York Stock Exchange and Securities and Exchange Commission rules. Under our Corporate Governance Guidelines, an “independent” director is one who meets the qualification requirements for being an independent director under applicable laws and the corporate governance listing standards of the New York Stock Exchange. Our Board evaluates any relationships between each director or nominee and PQ and makes an affirmative determination whether or not such director or nominee is independent. As a result of this review, our Board has affirmatively determined that each current member of our Board, with the exception of Mr. Chariag, our President and Chief Executive Officer, is independent under the corporate governance listing standards of the New York Stock Exchange.

**Diversity and Board Expertise**

We seek to have a Board that represents diversity as to experience, gender and ethnicity/race, but we do not have a formal policy with respect to diversity. We also seek a Board that reflects a range of talents, ages, skills, character and expertise, particularly in the areas of leadership, operations, risk management, accounting and finance, strategic planning and the industries in which we operate, sufficient to provide sound and prudent guidance with respect to our operations and interests.

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**Board and Committee Annual Performance Reviews**

Our Corporate Governance Guidelines provide that the Nominating and Corporate Governance Committee is responsible for reporting annually to the Board an evaluation of the overall performance of the Board. In addition, the written charters of the Audit Committee, Compensation Committee and Nominating and Corporate Governance Committee provide that each such committee shall evaluate its performance on an annual basis using criteria that it has developed and shall report to the Board on its findings.

**Director Nominations**

*Criteria and Process of Identifying and Evaluating Candidates for Consideration as a Director Nominee*

Under its charter, our Nominating and Corporate Governance Committee is responsible for recommending to the Board candidates to stand for election to the Board at the Company’s annual meeting of stockholders and for recommending candidates to fill vacancies on the Board that may occur between annual meetings of stockholders. The Nominating and Corporate Governance Committee may receive suggestions for new directors from a number of sources, including Board members and our President and Chief Executive Officer, and may also, in its discretion, employ a third-party search firm to assist in identifying candidates for director. The Corporate Governance Guidelines provide that each director should possess a combination of skills, professional experience and diversity of viewpoints necessary to oversee the Company’s business. It is the policy of the Board that directors should possess the highest personal and professional ethics, integrity and values, and be committed to representing the long-term interests of the Company’s stakeholders. Board members are expected to become and remain informed about the Company, its business and its industry and rigorously prepare for, attend and participate in all Board and applicable committee meetings. The Nominating and Corporate Governance Committee evaluates each individual in the context of the skills, character, diversity and expertise of the Board as a whole, with the objective of recommending a group that can best perpetuate the success of our business and represent stockholder interests through the exercise of sound judgment using its diversity of experience. In addition, the Nominating and Corporate Governance Committee considers, in light of our business, each director nominee’s experience, qualifications, attributes and skills that are identified in the biographical information contained in this Proxy Statement.

*Procedures for Recommendation of Director Nominees by Stockholders*

The Nominating and Corporate Governance Committee considers properly submitted recommendations for candidates to the Board from stockholders in accordance with our Bylaws. Any stockholder may submit in writing a candidate for consideration for each stockholder meeting at which directors are to be elected by no later than the close of business on the 90<sup>th</sup> day nor earlier than the close of business on the 120<sup>th</sup> day prior to the anniversary date of the prior year’s annual meeting, except that if the annual meeting is set for a date that is not within 30 days of such anniversary date, we must receive the notice no later than the close of business on the tenth day following the day on which the date of the annual meeting is first disclosed in a public announcement. Any stockholder recommendations for consideration by the Nominating and Corporate Governance Committee should include the candidate’s name, biographical information, and the information required by Section 1.2 of our Bylaws. Recommendations should be sent to c/o Secretary, PQ Group Holdings Inc., 300 Lindenwood Drive, Malvern, Pennsylvania 19355. The Nominating and Corporate Governance Committee evaluates candidates for the position of director recommended by stockholders in the same manner as candidates from other sources. The Nominating and Corporate Governance Committee will determine whether to interview any candidates and may seek additional information about candidates from third-party sources.

**Board Leadership Structure**

Under our Corporate Governance Guidelines, our Board may select a Chairperson at any time, who may also be an executive officer of the Company. James Gentilcore served as our Board Chairman until December 31, 2018, and no Chairperson has been appointed to succeed Mr. Gentilcore. Timothy Walsh, our Lead Independent Director, will preside over meetings of our Board of Directors until such time as a new Chairperson is selected. As Lead Independent Director, Mr. Walsh has the power to call meetings of the independent directors and to preside over such meetings.

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**Succession Planning**

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The Chief Executive Officer reviews succession planning and management development with the Board and the Nominating and Corporate Governance Committee on an annual basis. This succession planning includes the development of policies and principles for selection of the Chief Executive Officer, including succession in the event of an emergency or retirement.

**Majority Voting Guidelines**

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Our Corporate Governance Guidelines provide that in an uncontested election of directors, any nominee for director who receives a greater number of votes “withheld” from his or her election than votes “for” such election shall promptly tender his or her resignation following certification of the stockholder vote. The Board shall determine whether or not to accept such resignation within a period of 120 days following the stockholder vote, and will promptly publicly disclose its decision to accept or reject the resignation and the reasons for doing so.

**Policies Relating to Directors and Service**

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It is our policy that a director, other than the Chief Executive Officer, who is also an employee of the Company, shall offer his or her resignation from the Board to the Nominating and Corporate Governance Committee at the same time he or she retires or resigns from employment with the Company. In addition, it is our policy that directors who retire or otherwise change from the principal occupation or background association they held when they were originally invited to the Board should provide notice to the Nominating and Corporate Governance Committee or the Board and offer to resign from the Board. The Board does not believe that such directors should necessarily leave the Board, but it is our policy that there should be an opportunity for the Board to review the continued appropriateness of such director’s membership under these circumstances. The Board also believes that each director should advise the Nominating and Corporate Governance Committee in advance of accepting an invitation to serve as a member on another board of directors.

In general, the Board does not have a policy limiting the number of other public company boards of directors upon which a director may sit. However, the Nominating and Corporate Governance Committee shall consider the number of other boards of directors (or comparable governing bodies), particularly with respect to public companies, on which a prospective nominee is a member. Although the Board does not impose a limit on outside directorships, it does recognize the substantial time commitments attendant to membership on the Board and expects that directors devote all such time as is necessary to fulfill their accompanying responsibilities, both in terms of preparation for, and attendance and participation at, meetings.

Pursuant to our Audit Committee charter and the New York Stock Exchange listing rules, members may serve on no more than three separate public company audit committees simultaneously without prior review and determination by the Board that such simultaneous service would not impair the ability of such member to effectively serve on the Company’s Audit Committee.

**Communications with Directors**

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Stockholders and other interested parties may communicate directly with the Board, the non-employee directors or the independent directors as a group, or specified individual directors by writing to such individual or group c/o Secretary, PQ Group Holdings Inc., 300 Lindenwood Drive, Malvern, Pennsylvania 19355. The Secretary will forward such communications to the relevant group or individual at or prior to the next meeting of the Board.

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### Code of Conduct

We have adopted a written Code of Conduct applicable to all employees and a written Code of Ethics for Senior Executive and Financial Officers, which are designed to ensure that our business is conducted with integrity. These codes cover, among other things, professional conduct, conflicts of interest, accurate recordkeeping and reporting, public communications and the protection of confidential information, as well as adherence to laws and regulations applicable to the conduct of our business. We intend to disclose any future amendments to, or waivers from, these codes of ethics for PQ executive officers within four business days of the waiver or amendment through a website posting or by filing a Current Report on Form 8-K with the Securities and Exchange Commission.

### Online Availability of Information

The current versions of our Corporate Governance Guidelines, Code of Conduct, Code of Ethics for Senior Executive and Financial Officers and charters for our Audit Committee, Compensation Committee, Nominating and Corporate Governance Committee and Health, Safety and Environment Committee are available by clicking on "Corporate Governance" in the Investors section of our website, [www.pqcorp.com](http://www.pqcorp.com). These materials are also available in print free of charge to stockholders, upon written request to c/o Secretary, PQ Group Holdings Inc., 300 Lindenwood Drive, Malvern, Pennsylvania 19355.

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## EXECUTIVE OFFICERS

The following table sets forth the name, age, and position, as of March 1, 2019, of our current executive officers.

Name	Age	Position
Belgacem Chariag	56	President and Chief Executive Officer
Michael Crews	52	Executive Vice President and Chief Financial Officer
Scott Randolph	56	Vice President and President — Performance Materials
David J. Taylor	63	Vice President and President — Performance Chemicals
Ray Kolberg	57	Vice President and President — Catalysts
Kurt Bitting	43	Vice President and President — Refining Services
Joseph S. Koscinski	53	Vice President, Secretary and General Counsel
William J. Sichko, Jr.	65	Vice President, Chief Administrative Officer

**Biographical information concerning Belgacem Chariag, our President and Chief Executive Officer, is set forth above under “Board of Directors.”**

**Michael Crews** became our Executive Vice President and Chief Financial Officer in August 2015. From 2008 to 2015, Mr. Crews was Executive Vice President and Chief Financial Officer at Peabody Energy Corporation. From 1998 to 2008, Mr. Crews held various management positions at Peabody Energy Corporation including Vice President—Operations Planning, Assistant Treasurer and Director—Financial and Capital Planning. Mr. Crews began his career in KPMG’s audit function.

**Scott Randolph** became our Vice President and President—Performance Materials in March 2019 after having served as Executive Vice President and Group President—Performance Materials and Chemicals from December 2016 to February 2019. From March 2016 to December 2016, Mr. Randolph served as Vice President and President—Global Performance Chemicals after previously serving as Vice President and President—Performance Chemicals Americas and Australia and Performance Materials. From April 2005 to May 2016, Mr. Randolph served as President of Performance Materials. Mr. Randolph originally joined us as Senior Vice President Strategic Planning in February 2005. From 2000 to 2005, Mr. Randolph held the position of Chief Financial Officer with Peak Investments, LLC. From 1990 to 2000, Mr. Randolph held a number of management positions with Harris Chemical Group and IMC Global following IMC Global’s acquisition of Harris Chemical Group. Mr. Randolph’s last position with IMC Global was General Manager of the Worldwide Boron Business. From 1989 to 1990, Mr. Randolph held management positions with General Chemical. Prior to that, Mr. Randolph served as a nuclear trained naval officer from 1984 to 1989.

**David J. Taylor** became our Vice President and President—Performance Chemicals in March 2019 after having served as Executive Vice President and Group President—Environment Catalysts and Services from April 2018 to February 2019. From September 2017 through March 2018, Mr. Taylor served as our Senior Vice President—Strategic Development. Prior to joining us, Mr. Taylor served in several senior management positions with Air Products and Chemicals, Inc., a global industrial gas and chemicals supplier. From 2014 to 2016, he was Vice President, Energy from Waste and from 2005 to 2014 he was Vice President, Energy Business. Mr. Taylor served as Vice President, Large Air Separation Units from 2003 to 2005 and Vice President, Industrial Chemicals Division from 2002 to 2003. Prior to that, Mr. Taylor held several operational and business development roles with Air Products in the industrial gas and energy businesses.

**Ray Kolberg** became our Vice President and President—Catalysts in March 2019 and has served as the President of our Catalysts group since January 2016. From February 2012 through December 2015, Mr. Kolberg was Senior Vice President of Formulated Products for Momentive Performance Materials.

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**Kurt Bitting** became Vice President and President—Refining Services in March 2019. From September 2017 until February 2019, Mr. Bitting served as PQ’s Vice President—Refining Services and between May 2016, when he joined PQ as a result of the business combination with Eco Services, and August 2017, he was Business Director in the Refining Services business. Prior to joining PQ, Mr. Bitting held management positions at Kinder Morgan, Inc., Sprint Corporation, Solvay USA Inc. and Eco Services Operations LLC. As a Captain in the U.S. Army, Mr. Bitting served as a Company Commander in the 10<sup>th</sup> Mountain Division.

**Joseph S. Koscinski** became our Vice President, Secretary and General Counsel in November 2015. From August 1995 to October 2015, Mr. Koscinski was an attorney in the Business Services Group of Babst, Calland, Clements and Zomnir, P.C., a law firm in Pittsburgh, Pennsylvania, where he was named a shareholder in 2003 and where his corporate practice included mergers and acquisitions, real estate matters and commercial contracts. While in private practice, Mr. Koscinski served as outside corporate counsel to PQ Corporation since 2005.

**William J. Sichko, Jr.** became our Vice President, Chief Administrative Officer in 2005. Mr. Sichko served as our Secretary from 2005 to November 2015, and is currently an Assistant Secretary. From 1998 through 2005, Mr. Sichko was Chief Administrative Officer with Peak Investments, LLC. From 1991 through 1998, he held management positions with Harris Chemical Group and IMC Global following IMC Global’s acquisition of Harris Chemical, including serving as Senior Vice President of Human Resources from 1996 to 1998. From 1987 to 1991, Mr. Sichko was a manager with General Chemical.





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## STOCKHOLDER INFORMATION

### STOCK OWNERSHIP

The following table sets forth information regarding the beneficial ownership of our Common Stock as of March 1, 2019 by:

- each person or group of affiliated persons known by us to be the beneficial owner of more than 5% of our Common Stock;
- each of our named executive officers, directors and director nominees; and
- all of our directors, director nominees and executive officers as a group.

The percentage ownership information shown in the table below is based upon 135,727,810 shares of Common Stock outstanding as of March 1, 2019.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our Common Stock. We have determined beneficial ownership in accordance with the rules of the Securities and Exchange Commission. These rules generally attribute beneficial ownership of shares to persons who possess sole or shared voting or investment power with respect to such shares. The information does not necessarily indicate beneficial ownership for any other purpose. Under these rules, the number of shares of Common Stock deemed outstanding includes shares issuable upon exercise of options and held by the respective person or group which may be exercised or converted within 60 days after March 1, 2019 as well as shares of restricted stock of which a respective person has voting power. These shares are deemed to be outstanding and beneficially owned by the person holding those options for the purpose of computing the percentage ownership of that person or entity, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person or entity.

Unless otherwise indicated below, the address for each listed director, officer and stockholder is c/o PQ Group Holdings Inc., 300 Lindenwood Drive, Malvern, Pennsylvania 19355. The inclusion in the following table of those shares, however, does not constitute an admission that the named stockholder is a direct or indirect beneficial owner. Unless otherwise indicated and subject to applicable community property laws, to our knowledge, each stockholder named in the following table possesses sole voting and investment power over the shares listed, except for those jointly owned with that person's spouse.

Name	Number of Shares	Percentage
<i>Beneficial holders of 5% or more of our outstanding Common Stock:</i>		
CCMP Capital Investors III, L.P. and related investment funds <sup>(1)</sup>	61,962,767	45.7%
INEOS Investments Partnership <sup>(2)</sup>	32,909,062	24.2%
<i>Directors and named executive officers:</i>		
James F. Gentilcore <sup>(3)</sup>	843,716	*
Greg Brenneman <sup>(4)</sup>	—	—
Timothy Walsh <sup>(4)</sup>	—	—
Mark McFadden <sup>(4)</sup>	—	—
Robert Toth <sup>(4)</sup>	—	—
Robert Coxon <sup>(5)</sup>	88,196	*
Andrew Currie <sup>(6)</sup>	—	—
Jonny Ginns	10,699	*
Kyle Vann <sup>(7)</sup>	89,593	*
Martin Craighead	29,515	*

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Name	Number of Shares	Percentage
Kimberly Ross	12,375	*
Belgacem Chariag	—	*
Michael Crews <sup>(8)</sup>	260,127	*
Scott Randolph <sup>(9)</sup>	330,397	*
Paul Ferrall <sup>(10)</sup>	777,046	*
David J. Taylor <sup>(11)</sup>	46,910	*
All executive officers and directors as a group (18 persons) <sup>(12)</sup>	3,471,270	2.6%

\* Indicates less than 1%

- (1) Includes 29,370,897 shares of our Common Stock held by CCMP Capital Investors III, L.P. ("CCMP Capital Investors"), 2,977,037 shares of our Common Stock held by CCMP Capital Investors III (Employee), L.P. ("CCMP Employee"), 8,954,565 shares of our Common Stock held by CCMP Capital Investors III (AV-7), L.P. ("CCMP AV-7"), 506,610 shares of our Common Stock held by CCMP Capital Investors III (AV-8), L.P. ("CCMP AV-8"), 10,127,880 shares of our Common Stock held by CCMP Capital Investors III (AV-9), L.P. ("CCMP AV-9"), 663,600 shares of our Common Stock held by CCMP Capital Investors III (AV-10), L.P. ("CCMP AV-10" and, together with CCMP Capital Investors, CCMP Employee, CCMP AV-7, CCMP AV-8 and CCMP AV-9, the "CCMP Capital Funds") and 9,362,178 shares of our Common Stock held by Quartz Co-Invest, L.P. ("Quartz" and, together with the CCMP Capital Funds, the "CCMP Investors"). The general partner of the CCMP Capital Funds is CCMP Capital Associates III, L.P. ("CCMP Capital Associates"). The general partner of CCMP Capital Associates is CCMP Capital Associates III GP, LLC ("CCMP Capital Associates GP"). The general partner of Quartz is CCMP Co-Invest III A GP, LLC ("CCMP Co-Invest GP"). CCMP Capital Associates GP and CCMP Co-Invest GP are each wholly owned by CCMP Capital, LP. The general partner of CCMP Capital, LP is CCMP Capital GP, LLC ("CCMP Capital GP"). CCMP Capital GP ultimately exercises voting and investment power over the shares of our Common Stock held by the CCMP Investors. As a result, CCMP Capital GP may be deemed to share beneficial ownership with respect to the shares of our Common Stock held by the CCMP Investors. The investment committee of CCMP Capital GP with respect to the shares of our Common Stock consists of Christopher Behrens and Messrs. Brenneman and Walsh. Messrs. Brenneman and Walsh each serve as a director of the Company. Each of the CCMP entities has an address of c/o CCMP Capital Advisors, LP, 277 Park Avenue, New York, New York 10172.
- (2) The partners of INEOS Investments Partnership are James A. Ratcliffe, John Reece, Andrew Currie and INEOS Silicas Holdings Limited. Mr. Ratcliffe, as the majority owner of INEOS Investments Partnership, has the power to control the voting and disposition of the shares of our Common Stock held by INEOS Investments Partnership. The address of INEOS Investments Partnership is Avenue des Utins, 3, CH-1180, Rolle Switzerland. On March 20, 2019, INEOS Investments Partnership transferred all of its shares of our Common Stock to its affiliate, INEOS Limited, which also is owned by Messrs. Ratcliffe, Reece and Currie. Mr. Ratcliffe, as the majority owner of INEOS Limited, retained the power to control the voting and disposition of the shares of our Common Stock held as of March 20, 2019 by INEOS Limited.
- (3) Includes (a) 373,797 shares of our Common Stock held by Mr. Gentilcore that can be acquired upon the exercise of outstanding options and (b) 246,755 shares of our Common Stock and 33,480 shares of our restricted Common Stock subject to vesting conditions held by trusts for which Mr. Gentilcore is the grantor.
- (4) Does not include shares of our Common Stock held by the CCMP Investors. The address of each of Messrs. Brenneman, McFadden, Toth and Walsh is c/o CCMP Capital Advisors, LP, 277 Park Avenue, New York, New York 10172.
- (5) Includes 25,476 shares of our restricted Common Stock subject to vesting conditions.
- (6) Does not include shares of our Common Stock held by INEOS Investments Partnership or INEOS Limited.
- (7) Includes 30,472 shares of our Common Stock that can be acquired upon the exercise of outstanding options.
- (8) Includes 78,471 shares of our Common Stock that can be acquired upon the exercise of outstanding options and 96,015 shares of our restricted Common Stock subject to vesting conditions held by Mr. Crews and 28,005 shares of our Common Stock held by a revocable trust for which Mr. Crews is the grantor.
- (9) Includes 170,905 shares of our Common Stock that can be acquired upon the exercise of outstanding options, 30,334 shares of our Common Stock held by a revocable trust for which Mr. Randolph is the grantor and 30,334 shares of our Common Stock held by an investment corporation controlled by Mr. Randolph.
- (10) Includes 170,905 shares of our Common Stock that can be acquired upon the exercise of outstanding options and 84,903 shares of our restricted Common Stock subject to vesting conditions.
- (11) Includes 18,587 shares of our Common Stock that can be acquired upon the exercise of outstanding options.
- (12) Includes 165,321 shares of our Common Stock that can be acquired upon the exercise of outstanding options and 457,127 shares of our restricted Common Stock subject to vesting conditions.

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## SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Section 16(a) of the Exchange Act requires our directors, executive officers and holders of more than 10% of our Common Stock to file reports of holdings and transactions in our Common Stock with the Securities and Exchange Commission. Specific due dates for these reports have been established and we are required to report any failure to file by such dates during fiscal year 2018. Based on our review of filings made with the Securities and Exchange Commission and representations made by our directors and executive officers, we believe that all of our directors, executive officers and greater than 10% holders timely filed all reports that were required to be filed under Section 16(a).

## TRANSACTIONS WITH RELATED PERSONS

### Amended and Restated Stockholders Agreement

In May 2016 we entered into an amended and restated stockholders agreement with certain of our stockholders, including investment funds affiliated with CCMP, INEOS, our directors and officers who held shares of our Common Stock and certain other investors. In connection with our initial public offering, the stockholders agreement was further amended and restated.

The stockholders agreement, as amended and restated, provides affiliates of CCMP with certain demand registration rights, including shelf registration rights, in respect of shares of our Common Stock held by them and also provides that, in the event that we register additional shares of our Common Stock for sale to the public, we will be required to give notice of such registration to such affiliates of CCMP and certain other stockholders, and, subject to certain limitations, include shares of our Common Stock held by them in such registration. In addition, we will be required to bear the registration expenses, other than underwriting discounts and commissions and transfer taxes, associated with any registration of shares described above and to indemnify such stockholders and certain other persons against certain liabilities that may arise under the Securities Act in connection with any such offering and sale of our shares.

### Policies and Procedures for Related Party Transactions

Our Board has adopted a policy with respect to the review, approval and ratification of related party transactions. Under the policy, the Nominating and Corporate Governance Committee is responsible for reviewing and approving related party transactions. The policy applies to transactions, arrangements and relationships (including any indebtedness or guarantee of indebtedness) or any series of similar transactions, arrangements or relationships in which the aggregate amount involved will, or may be expected to, exceed \$120,000 with respect to any fiscal year, and where we (or one of our subsidiaries) are a participant and in which a related party has or will have a direct or indirect material interest. In the course of reviewing potential related party transactions, the Nominating and Corporate Governance Committee will consider the nature of the related party's interest in the transaction; the presence of standard prices, rates or charges or terms otherwise consistent with arms-length dealings with unrelated third parties; the materiality of the transaction to each party; the reasons for the Company entering into the transaction with the related party; the potential effect of the transaction on the status of a director as an independent, outside or disinterested director or committee member; and any other factors the Nominating and Corporate Governance Committee may deem relevant.

## EXECUTIVE COMPENSATION

### REPORT OF THE COMPENSATION COMMITTEE

The Compensation Committee has reviewed and discussed the Compensation Discussion and Analysis section set forth below with our management. Based on this review and discussion, the Compensation Committee recommended to our Board that the Compensation Discussion and Analysis section be included in this Proxy Statement which will be incorporated by reference in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

**Respectfully submitted by the Compensation Committee of our Board**

**Timothy Walsh, Chair**  
**Andrew Currie**  
**Kyle Vann**

## COMPENSATION DISCUSSION AND ANALYSIS

### Introduction

This section discusses the principles underlying the material components of our executive compensation program for our executive officers who are named in the Summary Compensation Table and the factors relevant to an analysis of our executive compensation policies and decisions. For the year ended December 31, 2018, our named executive officers included our principal executive officers, our principal financial officer, and our next three most highly compensated executive officers.

Executive	Title
<b>Belgacem Chariag</b> (1)	President and Chief Executive Officer
<b>Michael Crews</b>	EVP and Chief Financial Officer
<b>Scott Randolph</b> (2)	EVP and President — Performance Materials and Chemicals
<b>David J. Taylor</b> (3)	EVP and President — Environmental Catalysts and Services
<b>Paul Ferrall</b> (4)	Senior Vice President — Strategic Development
<b>James Gentilcore</b> (5)	Chairman, President and Chief Executive Officer

- (1) *Mr. Chariag became our President and Chief Executive Officer on August 9, 2018.*
- (2) *Mr. Randolph served as EVP and President – Performance Materials & Chemicals during 2018. Mr. Randolph became our Vice President and President – Performance Materials in March 2019.*
- (3) *Mr. Taylor served as EVP and President – Environmental Catalysts and Services beginning in April 2018. Mr. Taylor became our President – Performance Chemicals in March 2019.*
- (4) *Mr. Ferrall served as Senior Vice President, Strategic Development beginning in April 2018. Mr. Ferrall became our Senior Vice President – Business Development in March 2019 and is no longer serving as an executive officer of the Company.*
- (5) *Mr. Gentilcore transitioned from President and Chief Executive Officer to Executive Chairman on August 9, 2018. He resigned as Executive Chairman and member of our Board of Directors effective December 31, 2018.*

### Executive Summary

#### 2018 Compensation Decisions

In connection with the Company's initial public offering in September 2017, we made certain changes to the base salary and annual incentive opportunities of our then-employed named executive officers after a review of market data. In addition, we made grants of significant long-term incentive awards shortly after the initial public offering. No additional changes to base salary or annual incentive opportunities were made in 2018 for these named executive officers, nor were additional long-term incentive awards granted in 2018, except as described below for Mr. Gentilcore.

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In 2018, the Compensation Committee approved the following compensation decisions in connection with Mr. Chariag joining the Company as President and Chief Executive Officer, Mr. Gentilcore transitioning to the position of Executive Chairman and later resigning from that position and from our Board of Directors, and the promotion of Mr. Taylor.

- Mr. Chariag assumed the role of President and Chief Executive Officer on August 9, 2018. As more fully described below in this position, he has an annual base salary of \$880,000 and a target annual incentive opportunity of 100% of base salary. He was also provided with a long-term incentive grant. The long-term incentive grant consisted of time-vesting restricted stock units with a grant date value of \$1,320,000 and time-vesting stock options with a grant date value of \$1,320,000, both granted as of the date of his hire. The Compensation Committee considered market data, historical company practice, internal pay equity and Mr. Chariag's compensation at his prior employer when establishing his compensation levels and equity grants in connection with his hiring.
- Mr. Gentilcore transitioned from President and Chief Executive Officer to the role of Executive Chairman on August 9, 2018, and he resigned as Executive Chairman and member of the Board effective on December 31, 2018. In connection with his service during the transition period and his resignation, he received the compensation and severance benefits described in the "Elements of 2018 Compensation" and "Severance Benefits" sections below, including a stock award at the end of his service.
- Mr. Taylor was promoted to EVP and Group President, Environmental Catalysts and Services effective April 1, 2018, and received an increase in base salary from \$400,000 to \$480,000 and an increase in target annual incentive opportunity from 55% of base salary to 75% of base salary in connection with that promotion.

In addition, with respect to 2018, the Compensation Committee approved an annual incentive payment to each of our named executive officers under the PQIP, our annual incentive plan, described below, based on the Company's achievement of specific financial performance and operational goals for that year.

**Corporate Governance and Best Practices**

What We Do	
<b>Pay for performance</b>	Consistent with our goal of creating a performance-oriented environment, a substantial portion of executive pay is based on the achievement of specific strategic and financial goals or the performance of our Common Stock.
<b>Stock ownership guidelines</b>	Our Chief Executive Officer must hold shares of our Common Stock having a value of at least 5X base salary, and the other named executive officers must hold shares of our Common Stock having a value of at least 3X base salary. Our named executive officers have five years to comply with our stock ownership guidelines and are required to retain at least 50% of the after-tax shares received from equity awards until the required ownership levels are achieved.
<b>Clawback</b>	Our named executive officers, in certain circumstances, would be required to return the value of equity awards if our financial statements are restated as a result of their wrongdoing. Additionally, our named executive officers would be required to return any gain received in connection with the exercise, vesting, payment or other realization of income related to an equity award in the event of a breach of any non-solicitation, non-interference or confidentiality obligations or violation of our Code of Conduct.
<b>Independent Compensation Consultant</b>	The Compensation Committee retains an independent compensation consultant that provides no other services to the Company.

What We Don't Do	
<b>No rich supplemental retirement plan benefits are offered</b>	We provide a modest supplemental retirement opportunity tied to the statutory caps in our 401(k) plan.
<b>No change in control excise tax gross ups</b>	In accordance with good governance best practices, we provide no change in control excise tax gross-ups.
<b>No short-term trading, short sales, hedging or pledging</b>	As part of our policy on insider trading and communications with the public, all of our employees, including our named executive officers, as well as our directors and consultants, are prohibited from engaging in speculative transactions in our stock, including short sales, puts/calls, hedging transactions and margin accounts or pledges.
<b>No annual incentives for named executive officers not funded by financial performance</b>	Minimum financial hurdles must be satisfied before our named executive officers can earn any annual incentive compensation.

**Say on Pay Advisory Vote**

The Compensation Committee takes seriously the ability of stockholders to weigh in on our compensation decisions through a “say on pay” advisory vote.

At the May 4, 2018 Annual Meeting of Stockholders, our first as a public company, stockholders approved, on an advisory basis, the compensation paid by us to our named executive officers. Approval was secured by 97 percent of the votes cast.

In addition, the stockholders voted, on an advisory basis, to hold a say-on-pay advisory vote each year.

This year, we are again asking stockholders to consider our executive compensation program and provide us with a favorable advisory vote on the compensation for our named executive officers.

**Executive Compensation Program Philosophy and Overview**

Our compensation philosophy is to provide pay that:

- Aligns the interests of our named executive officers with our stockholders’ interests by rewarding performance that is tied to creating shareholder value; and
- Provides an amount and mix of total compensation for each of our named executive officers that we believe is competitive.

We seek to implement our pay philosophy by providing a total compensation package that includes three main components: base salary, annual performance-based bonus and long-term equity-based awards. The Compensation Committee takes into account individual performance and competitive market practice in determining the compensation package for each named executive officer. A compensation peer group has been formed with the assistance of our independent compensation consultant, and this peer group is referenced in the discussion below. We utilized the peer group as a tool in making compensation decisions for 2018, and we expect to continue to utilize one when making compensation decisions going forward.

Base salary has been set with a view toward attracting and retaining executive officer talent.

Our annual incentive plan (the “PQIP”) is a broad-based plan under which annual performance-based cash opportunities are awarded to our named executive officers and other employees, and which, for 2018, paid based on the achievement of annual EBITDA, adjusted free cash flow, and safety goals.

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Our long-term equity-based awards consist of stock options, restricted shares and restricted stock units that are subject to time and/or performance vesting conditions. The long-term equity-based awards we granted prior to our initial public offering were made in amounts intended to be competitive for private equity backed ventures in the specialty chemicals space. The size of grants made following our initial public offering in 2017 and 2018 was determined with reference to peer group data, as well as other relevant factors, including, with respect to awards made immediately following our initial public offering, the need to retain our executive team following the offering. In 2019, to further enhance our pay for performance philosophy, we added performance share units (“PSUs”) to the mix of long-term incentives that we grant.

Each of these elements of compensation is discussed in more detail below.

We believe that our executive compensation program is strongly aligned with the interests of our stockholders:

- For several years before our initial public offering, our named executive officers and members of our senior leadership team who were employed by us prior to the initial public offering have been significant owners of the Company, and we expect this to continue.
- Our named executive officers and senior leadership team have been offered the opportunity to purchase equity in the Company over the last several years, in addition to receiving equity as a form of incentive compensation.
- By providing a substantial portion of our named executive officers’ total compensation package in the form of equity-based awards, we have been able to create an incentive to build shareholder value over the long-term.
- By weighting our named executive officers’ compensation more heavily in favor of long-term incentive compensation, including time- and performance-vesting stock options, restricted shares and restricted stock units, we have built a strong “pay for performance” culture. This has been further strengthened with the use of PSUs starting in 2019.
- Our annual performance-based bonus is contingent upon the achievement of financial performance and qualitative goals. The amount of bonus compensation ultimately received varies with our annual financial performance, thereby providing an additional incentive to maximize shareholder value.

We will continue to promote share ownership and a strong pay-for-performance culture. We believe that this philosophy has been successful in motivating, retaining and incentivizing our named executive officers and providing value to our stockholders.

### Compensation Decision Making Process

#### Role of the Compensation Committee and Management

Our executive compensation program is determined and approved by the Compensation Committee. During 2018, the Compensation Committee was responsible for the oversight, implementation and administration of all our executive compensation plans and programs. None of the named executive officers had any role in approving the compensation of the other named executive officers. However, the Compensation Committee does consider the recommendations of our President and Chief Executive Officer in setting compensation levels for our named executive officers other than himself. The Compensation Committee determined the compensation of our President and Chief Executive Officer.

On an annual basis, the Compensation Committee reviews compensation for the named executive officers in conjunction with performance evaluations, salary increase recommendations, determination of bonus payouts and deliberations regarding long-term incentive grants. The Compensation Committee has conducted and plans to continue to conduct annual reviews of our executive compensation program for alignment with our compensation philosophy. The Compensation Committee will make decisions taking into account good governance practices regarding compensation, including reliance on market data for the chemical and specialty chemical industries and the other considerations described in this Compensation Discussion and Analysis.

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**Compensation Consultant; Review of Relevant Compensation Data**

The Compensation Committee engaged WealthPoint, LLC (“WealthPoint”) as the independent advisor to the Compensation Committee effective in 2018. WealthPoint reviewed the Company’s overall executive compensation program in comparison to comparably-sized public companies in industries similar to the Company’s. In addition, WealthPoint advised the Compensation Committee on the appropriate mix of compensation components for compensating our executive officers, and facilitated the Compensation Committee’s determination of our executive officers’ performance-based compensation, including the introduction of PSUs in 2019. WealthPoint did not provide any other services to the Company or our management or have any other direct or indirect business relationships with the Company or its management. The Compensation Committee has assessed the independence of WealthPoint and concluded that its work in 2018 did not raise any conflicts of interest.

**Compensation Peer Group Data and Pay Mix**

The Compensation Committee has identified a peer group of companies to be used for purposes of assessing market levels of compensation. For 2018, with the assistance of WealthPoint, the Compensation Committee reviewed the compensation peer group used for 2017 compensation setting to determine its continued appropriateness, and determined that it was appropriate to remove Lanxess Solutions US, Inc. because it is no longer an independent public company. As noted above, the Compensation Committee also considered other factors in assessing and setting compensation in 2018. The companies below were selected because they are in the chemical and specialty chemical space and generally have revenues ranging from approximately 50% to 200% of the Company’s revenues.

Albermarle Corporation	International Flavors & Fragrances, Inc.	A. Schulman, Inc.
Cabot Corporation	Kraton Corporation	Sensient Technologies Corporation
FMC Corporation	Minerals Technologies, Inc.	Stepan Company
GCP Applied Technologies, Inc.	MPM Holdings, Inc.	W.R. Grace & Co.
H.B. Fuller Company	Platform Specialty Products Corporation	Westlake Chemical Corporation
Innophos Holdings, Inc.	PolyOne Corporation	
Innospec, Inc.	Quaker Chemical Corporation	

In 2018, the Compensation Committee reviewed competitive compensation practices, including peer group compensation data and a variety of other factors, to confirm that the structure of our cash compensation and equity-based awards was consistent with our compensation philosophy and market practice. In addition, the Compensation Committee used the peer group data provided by WealthPoint in order to determine the appropriate mix between cash compensation and equity-based awards and the appropriate size of cash compensation and equity-based awards for Mr. Chariag when he joined the Company and for Mr. Taylor, as it related to cash compensation, in connection with his promotion.

**Elements of Compensation in 2018**

For 2018, our compensation program for the named executive officers consisted of, in whole or part:

- Base salary;
- Annual performance-based cash awards;
- Long-term equity incentive awards; and
- Other benefits (retirement, health, perquisites, etc.).

As noted above, long-term equity incentive awards were made only to Mr. Chariag and Mr. Gentilcore in 2018.



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## Base Salary

We provide an annual base salary to our named executive officers to induce talented executives to join or remain with our Company, to compensate them for their services during the year and to provide them with a stable source of income.

The base salary levels of our named executive officers are reviewed annually by the Compensation Committee to determine whether an adjustment is warranted. The Compensation Committee may take into account numerous factors in making its base salary determinations, none of which are dispositive or individually weighted, including our financial performance, the state of our industry and local economies in which we operate, the named executive officer's relative importance and responsibilities, the named executive officer's performance and periodic reference to comparable salaries paid to other executives of similar experience in our industry in general, based on the Compensation Committee's expertise as well as market data drawn from our peer group, referenced above.

The annual base salary rates paid to our named executive officers for the years ended December 31, 2017 and 2018 are reported below. Because changes to base salaries were made in late 2017 in connection with our initial public offering, the actual base salary paid in 2017 to those named executive officers who were then employed as reflected in the Summary Compensation Table is different than the amounts reported below. In addition, Mr. Taylor's base salary was increased effective April 1, 2018 in connection with his new position, and the annualized amount reflected on the table below differs from the amount reported on the Summary Compensation Table.

Executive	2017	2018
<b>Belgacem Chariag<sup>(1)</sup></b>	N/A	\$ 880,000
<b>Michael Crews</b>	\$ 480,000	\$ 480,000
<b>Scott Randolph</b>	\$ 480,000	\$ 480,000
<b>David J. Taylor<sup>(2)</sup></b>	\$ 400,000	\$ 480,000
<b>Paul Ferrall</b>	\$ 480,000	\$ 480,000
<b>James Gentilcore<sup>(3)</sup></b>	\$ 880,000	\$ 880,000

(1) Mr. Chariag joined the Company on August 9, 2018.

(2) Mr. Taylor was promoted to EVP and Group President—Environmental Catalysts and Services as of April 1, 2018, at which point his base salary was increased from \$400,000 to \$480,000.

(3) Mr. Gentilcore transitioned from President and Chief Executive Officer to Executive Chairman on August 9, 2018 and resigned as Executive Chairman and member of our Board of Directors effective on December 31, 2018.

## Annual Performance-Based Cash Awards – The PQIP

We provide our named executive officers with annual performance-based cash award opportunities linked to our annual financial and operational performance. For 2018, the Compensation Committee chose three performance metrics, the achievement of which would determine the amount of annual cash awards paid to our named executive officers. Prior to 2018, annual performance-based cash awards had been determined based on the achievement of Adjusted EBITDA goals. The Compensation Committee decided to add an Adjusted Free Cash Flow goal and a Safety goal for 2018 because it believes that improvement in these two areas will create value for our shareholders.

Factor	Weight
Adjusted EBITDA	50%
Adjusted Free Cash Flow	25%
Safety	25%

The threshold EBITDA goal must be attained for payouts under any of the three goals to be funded.

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Metric/Goal	Definition
<b>Adjusted EBITDA</b>	EBITDA consists of net income (loss) attributable to the Company before interest, taxes, depreciation and amortization. Adjusted EBITDA consists of EBITDA adjusted for (i) non-operating income or expense, (ii) the impact of certain non-cash, nonrecurring or other items included in net income (loss) and EBITDA that we do not consider indicative of our ongoing operating performance, and (iii) depreciation, amortization and interest of our 50% share of the Zeolyst Joint Venture.
<b>Adjusted Free Cash Flow</b>	Adjusted free cash flow consists of cash flow from operating activities less purchases of property, plant and equipment plus proceeds from asset sales plus net interest proceeds on swaps designated as net investment hedges.
<b>Safety</b>	Recordable rate of safety incidents

Adjusted EBITDA and Adjusted Free Cash flow are non-GAAP financial metrics. An explanation of how we calculate these metrics is contained in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018 filed with the Securities and Exchange Commission.

The target annual performance-based cash award opportunity for each eligible executive was set as a percentage of base salary (i.e., actual base salary paid during 2018). The target award percentages for each of our named executive officers, other than Messrs. Chariag and Taylor, remained the same for 2018 as in 2017. As described above, Mr. Chariag's target award percentage was set when he commenced employment with us and Mr. Taylor's target award percentage was increased in connection with this promotion. For 2018, the target award percentages were as follows:

Executive	FYE Target Award
<b>Belgacem Chariag</b>	100%
<b>Michael Crews</b>	75%
<b>Scott Randolph</b>	75%
<b>David J. Taylor</b>	70% *
<b>Paul Ferrall</b>	75%
<b>James Gentilcore</b>	100%

\* Mr. Taylor was promoted to EVP and Group President—Environmental Catalysts & Services as of April 1, 2018. Mr. Taylor is eligible for a target bonus for 2018 of 70% of annualized base salary. 70% represents a blended target using a weighted average of three months of service at 55% (the target bonus for his prior position) and nine months at 75% (the target bonus for his position as of December 31, 2018).

For 2018, the PQIP was structured to pay for achieving goals related to each of the three performance metrics.

Category	Weight	Scale	Threshold	Target	Maximum
EBITDA	50%	Performance as a percent of target	93.2%	100%	104.1%
		Percentage of target bonus earned	25%	100%	200%
Adjusted Free Cash Flow	25%	Performance as a percent of target	86.2%	100%	110.3%
		Percentage of target bonus earned	25%	100%	200%
Safety	25%	Performance as a percent of target	90%	100%	150%
		Percentage of target bonus earned	25%	100%	150%

The level of performance actually achieved for 2018 in each of the three categories was as follows:

Measurement Category	(Thousands)		
	Target	Actual	Achievement As a % of Target
EBITDA	\$ 483,000	\$ 460,156 <sup>(1)</sup>	95.2%
Adjusted Free Cash Flow	\$ 145,000	\$ 134,151	92.8%
Safety <sup>(2)</sup>	0.90	0.71	117.6%

(1) Represents Adjusted EBITDA as defined by the PQIP, which differs from Adjusted EBITDA that was reported in our 2018 results due to the exclusion of certain reductions in expense that resulted from financial results below the PQ Group Holdings level that were below target.

(2) Based on recordable rate of safety incidents

The actual bonus earned by each of the named executive officers for 2018 was as follows:

Executive	PQIP Earned
<b>Belgacem Chariag<sup>(1)</sup></b>	\$ 250,865
<b>Michael Crews</b>	\$ 259,862
<b>Scott Randolph</b>	\$ 259,862
<b>David J. Taylor</b>	\$ 232,432
<b>Paul Ferrall</b>	\$ 259,862
<b>James Gentilcore</b>	\$ 635,219

(1) The bonus amount for Mr. Chariag is a prorated amount based on the number of days from his date of hire until December 31, 2018.

### Long-Term Equity Based Incentive Awards

Since the time of our initial public offering, all of our equity-based awards have been, and going forward will continue to be, granted under the 2017 Plan. Our equity incentive awards currently consist of time and/or performance vesting (i) restricted shares, (ii) restricted stock units and (iii) options to purchase shares of our Common Stock. As discussed in more detail below, PSUs were introduced in 2019 as part of the mix of long-term incentives that we grant.

In keeping with our pay-for-performance philosophy, the options and restricted shares granted prior to our initial public offering partially vest based on time, partially vest based on performance and partially vest on both time and performance. The performance vesting terms are described in more detail below. Each of our named executive officers, other than Messrs. Chariag and Taylor, holds equity awards granted prior to our initial public offering.

Of the time-vesting restricted shares and stock options issued prior to our initial public offering under the PQ Group Holdings Inc. Stock Incentive Plan (the "SIP"), the predecessor plan to the 2017 Plan, most of the awards vest ratably over a period of three years. Several awards vest in 50% increments over two and four years. All of these awards are subject to accelerated vesting upon a change in control.

The performance-based stock options and performance-based restricted shares currently outstanding are all unvested and will only vest on the achievement with respect to shares of our Common Stock of an average closing trading price equal or exceeding, in any ten trading day period, the lowest amount which, when multiplied by the number of shares of our Common Stock then held by investment funds affiliated with CCMP and added to the aggregate net proceeds received by investment funds affiliated with CCMP with respect to their shares of capital stock of the Company, would yield a quotient of equal or greater than two when divided by the equity investment in the Company by investment funds affiliated with CCMP. The quotient described above is referred to in this Compensation Discussion and Analysis as the "MOI Target." As of December 31, 2018, none of the performance-based stock options and performance-based restricted shares granted prior to our initial public offering had vested.

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### Grants in 2018

As stated above, the Compensation Committee and Board of Directors authorized grants shortly after our initial public offering in September 2017, and chose not to make an additional long term equity-based incentive award to our named executive officers in 2018. The two exceptions were (i) new hire grants made to Mr. Chariag when he assumed the role of President and CEO on August 9, 2018, and (ii) an additional grant made to Mr. Gentilcore in connection with his resignation as Executive Chairman and member of our Board of Directors. Those grants were as follows:

Executive	Number of Options	Exercise Price	Number of Restricted Stock Units/Shares	Grant Date Fair Value
Belgacem Chariag <sup>(1)</sup>	241,316	\$ 17.50	75,429	\$ 2,640,000
James Gentilcore <sup>(2)</sup>	—	—	14,498	\$ 200,000

(1) Mr. Chariag's stock options and restricted stock units are eligible to vest in two equal installments on each of the first two anniversaries of the grant date, subject to continued service through the applicable vesting date.

(2) Mr. Gentilcore's grant was made in the form of fully-vested shares of stock, in accordance with his separation agreement.

### Grants in 2019

In 2019, the Compensation Committee determined that it was advisable to make another grant of long-term equity incentive awards to its named executive officers, and did so on March 11, 2019. The equity incentive awards were in the form of restricted stock units and PSUs. One third of the restricted stock unit awards will vest on each of January 5, 2020, January 5, 2021 and January 5, 2022, generally subject to continued service. PSUs will be earned subject to the achievement of performance goals related to three-year average return on average net tangible assets and three-year average adjusted free cash flow over a performance period which commenced January 1, 2019 and which ends December 31, 2021. Depending on progress against performance goals, an amount ranging from 0% to 200% of target PSUs granted may actually be earned. The PSUs actually earned will be determined on the date the Compensation Committee certifies the level of achievement of the various performance measures, but no later than 60 days after the end of the three-year performance period. In order to be eligible to earn all awarded PSUs, a participant generally must remain employed until the end of the performance period. The grants made to our named executive officers on March 11, 2019 were as follows:

Name	Number of PSUs Granted at Target	Number of RSUs Granted	Total Value of Grant
Belgacem Chariag	142,765	85,658	\$ 3,519,998
Michael Crews	48,670	48,669	\$ 1,499,994
Scott Randolph	32,447	32,446	\$ 1,000,001
David J. Taylor	32,447	32,446	\$ 1,000,001
Paul Ferrall	19,468	19,468	\$ 600,004

### Other Elements of Compensation

#### Additional Executive Benefits and Perquisites

We provide our named executive officers with certain executive benefits that the Compensation Committee believes are reasonable and in the best interests of the Company and our stockholders. To the extent our named executive officers received these benefits in 2018, they are described in the footnotes to our 2018 Summary Compensation Table below. Consistent with our compensation philosophy, we currently intend to continue to maintain our current benefits for our named executive officers, including life insurance, relocation assistance, and the other benefits described below. The Compensation Committee, in its discretion, may revise, amend or add to a named executive officer's executive benefits if it deems it advisable. We believe these benefits are generally equivalent to benefits provided by comparable companies based on our experience and knowledge of general industry practices.

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**Health and Welfare Benefits**

Our named executive officers have the option to participate in various employee welfare benefit programs, including medical, dental and life insurance benefits. These benefit programs are generally available to all employees.

**Relocation Assistance**

The Company's business needs require it on occasion to relocate certain employees. To meet this need, we may, on a case by case basis, pay or reimburse certain relocation-related expenses, including temporary housing, living and travel expenses that are incurred by our employees, including our named executive officers.

**Severance and Change in Control Benefits**

Each of our named executive officers, except Mr. Taylor, is party to a severance agreement with us that provides them with severance protections and benefits in the event of certain qualifying terminations of their employment. Mr. Taylor was provided with a severance benefit in connection with his offer of employment. In connection with his hiring, Mr. Chariag entered into a severance agreement on terms and conditions that were consistent with the agreements entered into with our other named executive officers. The material terms of these agreements are described below under "Potential Payments Upon Termination or Change in Control—Severance Agreements."

None of our named executive officers is party to an employment agreement with the Company.

**Transition and Severance Arrangement with Mr. Gentilcore**

The Company entered into a transition agreement with Mr. Gentilcore under which he would transition from his position as President and Chief Executive Officer of the Company to Executive Chairman of the Company, effective August 9, 2018. The transition agreement provided that in the role of Executive Chairman, Mr. Gentilcore would remain a full-time executive employee of the Company and would continue to receive the compensation and benefits he received as Chief Executive Officer of the Company. It also provided that following the termination of his service as Executive Chairman, he would be eligible to receive the severance benefits in his existing severance agreement with the Company, dated as of August 31, 2017.

Mr. Gentilcore resigned from his positions as Executive Chairman of the Company and as Chairman and member of the Company's Board of Directors as of December 31, 2018. In connection with his departure, Mr. Gentilcore and the Company entered into a separation and general release agreement, dated December 21, 2018, under which Mr. Gentilcore agreed to a general release of claims in favor of the Company in exchange for:

- (i) certain payments, benefits and other consideration as provided for under the August 31, 2017 severance agreement (reflected in the Summary Compensation Table);
- (ii) accelerated vesting as of December 31, 2018 of all of his outstanding and unvested time-based equity awards (reflected in the "Option Exercises and Stock Vested in 2018" table);
- (iii) the ability to exercise all vested stock options for their full term;
- (iv) the continued eligibility for vesting under the terms of the relevant award agreements with respect to outstanding performance-based stock options and restricted stock during the period beginning January 1, 2019 and ending December 31, 2020; and
- (v) the grant of fully-vested shares of stock with a grant date value of \$200,000 as referred to in the section above entitled "Grants in 2018", and reflected in the Summary Compensation Table.

The Compensation Committee provided Mr. Gentilcore with certain additional benefits in connection with his termination in light of his significant contributions to the Company, including in connection with our initial public offering. Mr. Gentilcore's entitlement to these payments and benefits is subject to his continuing compliance with the terms of the severance agreement and separation and release agreement.

Since Mr. Gentilcore remained employed through December 31, 2018, he received his 2018 PQIP distribution in accordance with the terms of the PQIP. The terms of Mr. Gentilcore's severance agreement provide for the continued ratable payment of his annual base salary (\$880,000) and annual target bonus (\$880,000) over the two year period of January 1, 2019 to December 31, 2020. The terms of the severance agreement also provide for payment of relocation expenses and the continuation of the Company contributions for medical, vision and dental benefits over the same period unless he becomes entitled to these benefits from a new employer.

**Stock Ownership Guidelines for Executive Officers**

In connection with our initial public offering, the Compensation Committee adopted stock ownership guidelines applicable to our executive officers, including our named executive officers, and our non-employee directors. Under our stock ownership guidelines, each of our named executive officers, other than our Chief Executive Officer, is expected to have ownership of Company stock in an amount equal to at least three times the executive's annualized base salary and our Chief Executive Officer is expected to have ownership of Company stock in an amount equal to at least five times his annualized base salary. Executive officers subject to the guidelines will have five years to achieve the required ownership levels and, until they satisfy their ownership requirements, will be subject to a holding requirement with respect to 50% of the shares they acquire upon the vesting or exercise of equity-based awards (on an after-tax basis).

The following table summarizes the ownership of our Common Stock as of December 31, 2018 by our named executive officers:

Name	Ownership Requirement Relative to Annualized Base Salary	Ownership relative to Annualized Base Salary <sup>(1)</sup>
Belgacem Chariag <sup>(2)</sup>	5x	1.31x
Michael Crews	3x	10.63x
Scott Randolph	3x	26.88x
David J. Taylor	3x	3.0x
Paul Ferrall	3x	23.6x

(1) In accordance with our stock ownership guidelines, ownership amounts have been determined based on a share price of \$15.32, which is the average closing price of our Common Stock on the New York Stock Exchange over the 90-day trading period prior to December 31, 2018.

(2) Mr. Chariag joined the Company on August 9, 2018.

**Tax Considerations**

Section 162(m) of the Internal Revenue Code ("Section 162(m)") generally limits the deductibility of compensation paid to our named executive officers to \$1 million during any fiscal year. Prior to January 1, 2018, certain compensation that qualified as "performance-based" was exempted from the above deductibility limits under Section 162(m). However, the Tax Cuts and Jobs Act of 2017 generally eliminated the performance-based compensation exception, with certain limited grandfathering provisions.

Under a Section 162(m) transition rule for compensation plans or agreements of corporations which are privately held and which become publicly held in an initial public offering, compensation paid under a plan or agreement that existed prior to the

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initial public offering will not be subject to Section 162(m) until the earliest of (1) the expiration of the plan or agreement, (2) a material modification of the plan or agreement, (3) the issuance of all employer stock and other compensation that has been allocated under the plan, or (4) the first meeting of stockholders at which directors are to be elected that occurs after the close of the third calendar year following the year of the initial public offering (the "Transition Date"). The Compensation Committee may consider the impact of Section 162(m), to the extent it is expected to apply following the Transition Date, when structuring our executive compensation arrangements with our named executive officers, and will continue to monitor guidance and developments in this area. However, the Compensation Committee believes that its primary responsibility is to provide a compensation program in accordance with its overall compensation philosophy and policies described above, and it retains flexibility to approve compensation arrangements that may not be deductible in whole or in part under Section 162(m).

**2018 Summary Compensation Table**

The following table sets forth certain information with respect to compensation earned by or paid to our named executive officers for the year ended December 31, 2018, and where applicable, the years ending December 31, 2017 and December 31, 2016.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)(6)	Stock Awards (\$)(7)(8)	Option Awards (\$)(7)(8)	Non-Equity Incentive Plan Compensation (\$)(9)	All Other Compensation (\$)(10)(11)(12)	Total (\$)
<b>Belgacem Chariag,</b> <i>President and Chief Executive Officer<sup>(1)</sup></i>	2018	347,536	—	1,320,008	1,319,999	252,784	22,353	3,262,280
<b>Michael Crews,</b> <i>EVP and Chief Financial Officer</i>	2018	480,000	—	—	—	261,850	47,138	788,988
	2017	438,750	—	1,880,004	442,511	205,664	62,549	3,029,478
	2016	425,000	—	318,780	304,568	402,986	94,924	1,546,258
<b>Scott Randolph,<sup>(2)</sup></b> <i>EVP and Group President Perf. Materials &amp; Chemicals</i>	2018	480,000	—	—	—	261,850	56,036	797,886
	2017	438,750	150,000	1,200,000	300,000	82,266	56,573	2,227,589
	2016	425,000	200,000	—	507,813	—	232,853	1,365,666
<b>David J. Taylor,<sup>(3)</sup></b> <i>EVP and Group President, Environmental Catalysts and Services</i>	2018	460,000	—	—	—	234,210	30,433	724,643
	2017	133,333	—	1,200,000	300,000	45,833	4,289	1,683,455
<b>Paul Ferrall,<sup>(4)</sup></b> <i>Senior Vice President, Strategic Development</i>	2018	480,000	—	—	—	261,850	55,389	797,239
	2017	438,750	—	1,200,000	300,000	329,063	59,529	2,327,342
	2016	425,000	—	—	507,813	472,947	217,696	1,623,456
<b>James Gentilcore,<sup>(5)</sup></b> <i>Chairman, President and Chief Executive Officer</i>	2018	880,000	—	200,000	—	640,077	3,637,171	5,357,248
	2017	838,750	—	5,578,348	1,382,560	524,219	63,950	8,387,827
	2016	412,500	—	1,750,056	716,618	521,511	17,940	3,418,625

- (1) Mr. Chariag joined the Company on August 9, 2018. His base salary and annual performance-based bonus for 2018 were prorated based on the number of days employed during 2018.
- (2) Mr. Randolph became our Vice President and President – Performance Materials on March 1, 2019.
- (3) Mr. Taylor became our Vice President and President – Performance Chemicals on March 1, 2019.
- (4) Mr. Ferrall became our Senior Vice President – Business Development on March 1, 2019.
- (5) Mr. Gentilcore resigned as Executive Chairman and member of our Board of Directors effective on December 31, 2018.
- (6) Our Board awarded special bonuses to Mr. Randolph. In 2017, a \$150,000 special bonus was awarded for successfully integrating the Sovitec acquisition and, in 2016, a \$200,000 special bonus was awarded for successfully combining Performance Chemicals worldwide.
- (7) The amounts shown reflect the aggregate grant date fair value of time-based stock options and restricted stock units granted to Mr. Chariag and fully vested shares granted to Mr. Gentilcore in 2018, of time- and performance-based stock options and restricted

shares granted in 2017 and 2016 to Mr. Gentilcore and in 2016 to Mr. Crews, of time-based stock options and restricted stock units granted to Mr. Taylor in 2017, and of time-based stock options and restricted stock units granted to each of Messrs. Crews, Randolph, Ferrall and Gentilcore in 2017 and 2016, computed in accordance with FASB ASC Topic 718, in each case, disregarding the effects of estimated forfeitures. These amounts reflect our cumulative accounting expense over the vesting period, disregarding the effects of estimated forfeitures, and do not correspond to the actual value that may be realized by the named executive officers. For information on the valuation assumptions made in the calculation of these amounts, refer to Note 22 to the audited consolidated financial statements in our Form 10-K for the fiscal year ended December 31, 2018, Note 21 to the audited consolidated financial statements in our Form 10-K for the fiscal year ended December 31, 2017 and Note 21 to the audited consolidated financial statements in the prospectus filed in connection with our initial public offering. With respect to stock options and restricted shares that are subject to performance-based vesting conditions, the aggregate grant date fair value was determined based on the probable outcome of the performance conditions associated with such awards at the date of grant. For performance-based stock options, the aggregate grant date fair value of these awards, assuming the maximum level of performance is achieved, is: Mr. Gentilcore's 2017 and 2016 grants, \$43,824 and \$358,311, respectively; and Mr. Crews' 2016 grant, \$152,300. For performance-based restricted shares, the aggregate grant date fair value of these awards, assuming the maximum level of performance is achieved, is: Mr. Gentilcore's 2017 and 2016 grants, \$39,177 and \$374,959, respectively; and Mr. Crews' 2016 grant, \$159,482.

- (8) Included in 2018 are new hire grants made to Mr. Chariag of time-based stock options and restricted stock units that vest in two equal installments on each of the first two anniversaries of the grant date, generally subject to continued service through the applicable vesting date, and a grant to Mr. Gentilcore in connection of fully-vested shares of stock in accordance with his separation agreement.
- (9) The amounts reported in this column represent the annual cash performance-based bonuses earned by our named executive officers under the PQIP as a result of the achievement of certain Company performance objectives, as described above.
- (10) In 2016, Mr. Randolph and Mr. Ferrall each received additional cash compensation in the amount of \$176,529 related to an exchange of equity in connection with a corporate reorganization tied to the Company's business combination with Eco Services.
- (11) Included in 2018 is Mr. Gentilcore's severance benefits in the amount of \$3,570,460 as outlined in his severance agreement. The ratable payment of continued annual base salary (\$880,000) and annual target bonus (\$880,000) over the period January 1, 2019 to December 31, 2020 (an aggregate of \$3,520,000), relocation expenses (\$17,820) and continuation of the Company contributions for medical, vision and dental benefits over the same period (based, for the purposes of valuation, on the Company's contribution rates in effect on December 31, 2018, \$32,640) unless he becomes entitled to these benefits from a new employer. The continued payment over the period will be subject to compliance with the restrictive covenants in the Separation and General Release Agreement dated December 21, 2018.
- (12) The amounts shown in the All Other Compensation column for 2018, 2017 and 2016 include the following:

Executive	Year	401(k) Plan Company Match (\$)	401(k) Plan Company 4% Contribution	PRA SERP Company Contribution (\$)	Tax Prep Services (\$)	Relocation Expenses (\$)	Life Insurance (\$)	Housing Allowance (\$)	Car Allowance (\$)	Severance (\$)
Belgacem Chariag	2018	—	—	—	—	—	597	18,344	3,412	—
Michael Crews	2018	8,250	11,000	16,427	—	—	2,292	9,169	—	—
	2017	8,100	10,800	22,869	—	19,556 <sup>(a)</sup>	1,224	—	—	—
	2016	7,950	10,600	7,728	—	67,422	1,224	—	—	—
Scott Randolph	2018	8,250	11,000	11,491	23,003	—	2,292	—	—	—
	2017	8,100	10,800	14,750	21,699	—	1,224	—	—	—
	2016	7,950	10,600	15,005	21,545	—	1,224	—	—	—
David J. Taylor	2018	8,250	11,000	9,233	—	—	1,950	—	—	—
	2017	4,000	—	—	—	—	289	—	—	—
Paul Ferrall	2018	8,250	11,000	21,363	12,484	—	2,292	—	—	—
	2017	8,100	10,800	25,668	13,737	—	1,224	—	—	—
	2016	7,950	10,600	8,551	12,842	—	1,224	—	—	—
James Gentilcore	2018	8,250	11,000	45,169	—	—	2,292	—	—	3,570,460 <sup>(b)</sup>
	2017	8,100	10,800	43,610	—	—	1,440	—	—	—
	2016	—	10,600	5,900	—	10,431	1,440	—	—	—

- (a) The amount reported includes a reimbursement for relocation expenses of \$13,607 plus a reimbursement of \$5,949 for income taxes owed with respect to such reimbursement.
- (b) This amount includes Mr. Gentilcore's severance benefits as outlined in his severance agreement. The ratable payment of continued annual base salary (\$880,000) and annual target bonus (\$880,000) over the period January 1, 2019 to December 31, 2020, relocation expenses and continuation of the Company contributions for medical, vision and dental benefits over the same period (based, for the purposes of valuation, on the Company's contribution rates in effect on December 31, 2018) unless he becomes entitled to these benefits from a new employer. The continued payment over the period will be subject to compliance with the restrictive covenants in the Separation and General Release Agreement dated December 21, 2018.



2018 Grant of Plan-Based Awards

The following table summarizes plan-based awards granted to our named executive officers for the year ended December 31, 2018.

Executive	Award	Grant Date	Estimated Future Payouts Under Non-Equity Incentive Plan Awards <sup>(3)</sup>			Estimated Future Payouts Under Equity Incentive Plan Awards (#)	All Other Stock Awards: # of Shares of Stock or Units (#)	All Other Awards: # of shares Underlying Options (#)	Exercise or Base Price of Awards (\$/SH)	Total Grant Rate Fair Value of Stock and Option Awards (\$) <sup>(4)</sup>
			Threshold (\$)	Target (\$)	Maximum (\$)					
Belgacem Chariag <sup>(1)</sup>	PQIP	—	86,884	347,536	651,630	—	—	—	—	
	RSU Grant	8/9/2018	—	—	—	—	75,429	—	\$ 1,320,008	
	Option Grant	8/9/2018	—	—	—	—	—	241,316	\$ 17.50 \$ 1,319,999	
Michael Crews	PQIP	—	90,000	360,000	675,000	—	—	—	—	
Scott Randolph	PQIP	—	90,000	360,000	675,000	—	—	—	—	
David J. Taylor	PQIP	—	81,250	322,000	603,750	—	—	—	—	
Paul Ferrall	PQIP	—	90,000	360,000	675,000	—	—	—	—	
James Gentilcore <sup>(2)</sup>	PQIP	—	220,000	880,000	1,650,000	—	—	—	—	
	Stock Grant	12/27/2018	—	—	—	—	14,498	—	—	\$ 200,000

- (1) Represents new hire grants made to Mr. Chariag of stock options and restricted stock units that vest in two equal installments on each of the first two anniversaries of the grant date, generally subject to continued service through the applicable vesting date.
- (2) Represents a grant of fully-vested shares of our Common Stock to Mr. Gentilcore in connection with his resignation, in accordance with his separation agreement.
- (3) Represents potential payments pursuant to the PQIP, the Company's performance-based annual bonus plan. Actual amounts earned by the named executive officer under the PQIP with respect to 2018 are listed in the "Non-Equity Incentive Plan" column of the Summary Compensation Table above.
- (4) As required by SEC rules, amounts shown in the column "Grant Date Fair Value of Stock and Option Awards" represent the aggregate grant date fair value of restricted stock units, stock option and share awards granted in 2018 in accordance with FASB ASC Topic 718, disregarding the effects of estimated forfeitures. (See note (7) to the Summary Compensation Table above.)

2018 Outstanding Equity Awards at Fiscal Year End

The following table sets forth certain information with respect to outstanding equity awards held by our named executive officers as of December 31, 2018.

Executive	Grant Date	Option Awards					Stock Awards			
		# of Securities Underlying Unexercised Options (#) Exercisable <sup>(18)</sup>	# of Securities Underlying Unexercised Options (#) Unexercisable <sup>(18)</sup>	Equity incentive plan awards: # of Securities Underlying Unexercised Unearned Options (#) <sup>(18)</sup>	Option Exercise Price (\$) <sup>(19)</sup>	Option Expiration Date	# of Shares or Units of Stock That Have Not Vested (#) <sup>(20)</sup>	Market Value of Shares or Units of Stock That Have Not Vested (\$) <sup>(21)</sup>	Equity incentive plan awards: # of unearned shares, units or other rights that have not vested (#) <sup>(20)</sup>	Equity incentive plan awards: market or payout value of unearned shares, units or other rights that have not vested (\$) <sup>(21)</sup>
<b>Belgacem Chariag</b>										
	8/9/2018 <sup>(1)</sup>	—	—	—	—	—	75,429	1,117,103	—	—
	8/9/2018 <sup>(2)</sup>	—	241,316	—	17.50	8/9/2028	—	—	—	—
<b>Michael Crews</b>										
	8/1/2015 <sup>(3)(4)</sup>	—	—	—	—	—	78,750	1,166,288	52,500	777,525
	8/1/2015 <sup>(5)(6)</sup>	13,634	40,902	27,268	6.88	8/1/2025	—	—	—	—
	6/30/2016 <sup>(7)(8)</sup>	—	—	—	—	—	17,265	255,695	12,945	191,715
	6/30/2016 <sup>(9)(10)</sup>	30,451	60,904	45,678	8.05	6/30/2026	—	—	—	—
	10/2/2017 <sup>(11)</sup>	—	—	—	—	—	47,142	698,173	—	—
	10/2/2017 <sup>(12)</sup>	—	—	—	—	—	20,036	296,733	—	—
	10/2/2017 <sup>(9)</sup>	18,587	37,175	—	16.97	10/2/2027	—	—	—	—
	10/2/2017 <sup>(13)</sup>	15,799	15,800	—	16.97	10/2/2027	—	—	—	—
<b>Scott Randolph</b>										
	9/19/2007 <sup>(9)(14)</sup>	—	—	—	—	—	52,665	779,969	52,665	779,969
	2/24/2010 <sup>(9)(14)</sup>	—	—	—	—	—	32,238	477,445	32,238	477,445
	5/4/2016 <sup>(15)</sup>	152,318	—	—	8.04	5/4/2026	—	—	—	—
	10/2/2017 <sup>(11)</sup>	—	—	—	—	—	47,142	698,173	—	—
	10/2/2017 <sup>(9)</sup>	18,587	37,175	—	16.97	10/2/2027	—	—	—	—
<b>David J. Taylor</b>										
	10/2/2017 <sup>(11)</sup>	—	—	—	—	—	47,142	698,173	—	—
	10/2/2017 <sup>(9)</sup>	18,587	37,175	—	16.97	10/2/2027	—	—	—	—
<b>Paul Ferrall</b>										
	9/19/2007 <sup>(9)</sup>	—	—	—	—	—	52,665	779,969	52,665	866,339
	2/24/2010 <sup>(9)</sup>	—	—	—	—	—	32,238	477,445	32,238	530,315
	5/4/2016 <sup>(15)</sup>	152,318	—	—	8.04	5/4/2026	—	—	—	—
	10/2/2017 <sup>(11)</sup>	—	—	—	—	—	47,142	698,173	—	—
	10/2/2017 <sup>(9)</sup>	18,587	37,175	—	16.97	10/2/2027	—	—	—	—

Executive	Grant Date	Option Awards					Stock Awards			
		# of Securities Underlying Unexercised Options (#) Exercisable <sup>(18)</sup>	# of Securities Underlying Unexercised Options (#) Unexercisable <sup>(18)</sup>	Equity incentive plan awards: # of Securities Underlying Unexercised Unearned Options (#) <sup>(18)</sup>	Option Exercise Price (\$) <sup>(19)</sup>	Option Expiration Date	# of Shares or Units of Stock That Have Not Vested (#) <sup>(20)</sup>	Market Value of Stock That Have Not Vested (\$) <sup>(21)</sup>	Equity incentive plan awards: # of unearned shares, units or other rights that have not vested (#) <sup>(20)</sup>	Equity incentive awards: market or payout value of unearned shares, units or other rights that have not vested (\$) <sup>(21)</sup>
<b>James Gentilcore<sup>(16)</sup></b>										
	6/30/2016 <sup>(8)</sup>	—	—	—	—	—	—	—	30,435	450,742
	6/30/2016 <sup>(10)</sup>	107,474	107,475	107,475	8.05	6/30/2026	—	—	—	—
	1/15/2017 <sup>(8)</sup>	—	—	—	—	—	—	—	3,045	45,096
	1/15/2017 <sup>(10)</sup>	10,747	10,747	10,747	8.98	1/25/2027	—	—	—	—
	10/2/2017 <sup>(17)</sup>	163,569	—	—	16.97	10/2/2027	—	—	—	—
	10/2/2017 <sup>(17)</sup>	92,007	—	—	16.97	10/2/2027	—	—	—	—

- (1) Time-based restricted stock units will vest in two equal installments, beginning on the first anniversary of the grant date, generally provided the named executive officer is still providing service on the vesting date to us or one of our subsidiaries.
- (2) Time-based stock options will vest in two equal installments, beginning on the first anniversary of the grant date, generally provided the named executive officer is still providing services on the vesting date to us or one of our subsidiaries.
- (3) Time-based restricted shares will vest in two equal installments, with 50% vesting on the second anniversary of grant date and 50% vesting on the fourth anniversary of grant date, generally provided the named executive officer is still employed on the vesting date by us or one of our subsidiaries.
- (4) Performance-based restricted shares will vest on the earlier of the achievement of the MOI Target or August 1, 2019, generally provided the named executive officer is still providing services on the vesting date to us or one of our subsidiaries.
- (5) Time-based stock options will vest in two equal installments, with 50% vesting on the second anniversary of grant date and 50% vesting on the fourth anniversary of grant date, generally provided the named executive officer is still employed on the vesting date by us or one of our subsidiaries.
- (6) Performance-based stock options will vest on the earlier of the achievement of the MOI Target or August 1, 2019, generally provided the named executive officer is still providing services on the vesting date to us or one of our subsidiaries.
- (7) Time-based restricted stock will vest in three equal installments, beginning on the first anniversary of the grant date, generally provided the named executive officer is still employed on the vesting date by us or one of our subsidiaries.
- (8) Performance-based restricted shares will vest on achievement of the MOI Target, generally provided the named executive officer is still providing services on the vesting date to us or one of our subsidiaries.
- (9) Time-based stock options will vest in three equal installments, beginning on the first anniversary of the grant date, generally provided the named executive officer is still providing service on the vesting date to us or one of our subsidiaries.
- (10) Performance-based stock options will vest on the achievement of the MOI Target, generally provided the named executive officer is still providing services on the vesting date to us or one of our subsidiaries.
- (11) Time-based restricted stock units will vest in three equal installments, beginning on the first anniversary of the grant date, generally provided the named executive officer is still providing service on the vesting date to us or one of our subsidiaries.
- (12) Time-based restricted stock units will vest on June 30, 2019, generally provided the named executive officer is still providing service on the vesting date to us or one of our subsidiaries.
- (13) Time-based stock options will vest on June 30, 2019, generally provided the named executive officer is still providing service on the vesting date to us or one of our subsidiaries.
- (14) These shares have been assigned to an irrevocable family trust. Mr. Randolph is neither a trustee nor a beneficiary of this trust.
- (15) Time-based stock options that are fully-vested. These options were granted in an exchange of equity in connection with a corporate reorganization tied to the business combination with Eco Services.
- (16) Mr. Gentilcore's time-based stock restricted shares and restricted stock units became fully vested as of December 31, 2018 pursuant to the terms of his separation agreement and therefore are not included in this table.
- (17) Time-based stock options that are fully vested pursuant to the terms of the Mr. Gentilcore's separation agreement.
- (18) On September 28, 2017, the numbers of shares underlying outstanding Class A option awards were adjusted to reflect a stock split of 1 Class A share to 8.8275 common shares.
- (19) On September 28, 2017, the option exercise prices of outstanding option awards were adjusted to reflect the stock split described in note 18.

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- (20) On September 28, 2017, the numbers of restricted shares granted pursuant to outstanding restricted stock agreements were adjusted. The awards granted to Mr. Randolph and Mr. Ferrall on September 19, 2007 and February 24, 2010 were adjusted to reflect a stock split of 1 Class A share to 8.8275 common shares. The restricted stock awards granted to the named executive officers between April 30, 2015 and January 15, 2017 were adjusted to reflect the conversion of 1 Class B share to 15 common shares.
- (21) Fair market value has been determined based on the fair market value per share of our Common Stock of \$14.81, which was the closing price of a share of our Common Stock as of December 31, 2018.

### Option Exercises and Stock Vested in 2018

The following table shows amounts realized by our named executive officers upon the vesting of restricted shares or restricted stock units during the year ended December 31, 2018. No options were exercised by any of our named executive officers in the year ended December 31, 2018.

Executive	Stock Awards	
	Number of shares acquired on vesting (#)	Value realized on vesting (\$) <sup>(1)</sup>
Belgacem Chariag	—	—
Michael Crews	47,911	853,395
Scott Randolph	54,696	867,114
David J. Taylor	23,571	416,735
Paul Ferrall	54,696	867,114
James Gentilcore <sup>(2)</sup>	415,054	6,704,527

- (1) Amounts reflect the aggregate dollar value realized upon vesting by multiplying the number of shares that vested by the market value of the underlying Common Stock on the applicable vesting date.
- (2) Amounts reflect the awards that vested pursuant to the terms of Mr. Gentilcore's award agreements, the acceleration of Mr. Gentilcore's time-based restricted stock and restricted stock units pursuant to Mr. Gentilcore's separation agreement, and the award of fully-vested shares of stock granted to Mr. Gentilcore pursuant to Mr. Gentilcore's separation agreement.

### Retirement Plan Benefits

We maintain a tax-qualified 401(k) defined contribution plan in which substantially all of our full-time U.S. employees, including our named executive officers, are eligible to participate. We currently provide an employer contribution equal to 4% of qualifying earnings and an employer matching contribution equal to 50% of a participant's contributions up to 6% of qualifying earnings, subject to limits established by the Internal Revenue Code. As described in more detail below, our named executive officers participate in the PQ Corporation Non-Qualified Personal Retirement Account Excess Savings Plan, an excess benefit plan designed to provide supplemental contributions that cannot be provided under our 401(k) plan due to Internal Revenue Code limits. We believe these plans provide our named executive officers with an opportunity for tax-efficient savings and long-term financial security.

### Nonqualified Deferred Compensation

All of our named executive officers participate in the PQ Corporation Non-Qualified Personal Retirement Account Excess Savings Plan, or the PRA SERP. The PRA SERP is an excess benefit plan designed to provide supplemental Personal Retirement Account contributions that cannot be provided under the PQ Corporation Savings Plan (the Company's 401(k) plan) due to Internal Revenue Code limits. The plan is administered by a committee appointed by our Board.

**Contributions** — There are no executive contributions under the PRA SERP. Each plan year, we credit to participant accounts under the PRA SERP the excess of (a) the amount that would have been credited for that year to the participant's Personal Retirement Account under our 401(k) plan disregarding the dollar limits imposed by the Internal Revenue Code for maximum annual compensation over (b) the amount that was actually so credited. The plan administrator may from time to time also elect to make special contributions to participant accounts.

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**Earning and losses** — Participant accounts are deemed to be invested in Vanguard target retirement funds based on a participant's age. At the end of each calendar quarter, we adjust participant accounts with earnings/losses equal to that calendar quarter's return for the applicable target retirement fund.

**Vesting and distributions** — Participants vest in their accounts under the PRA SERP upon completion of three years of service or, if earlier, death or disability or a change in control. The value of a participant's vested account balance is paid in a lump sum on the first to occur of the participant's separation from service or disability, provided that distributions to "key employees" within the meaning of Section 416(i) of the Internal Revenue Code as of the date of the participant's separation from service will not be made until six (6) months after the participant's separation from service or, if earlier, the participant's death.

The following table provides information regarding participation by our named executive officers in the PRA SERP during the year ended December 31, 2018.

Name	Executive Contributions in Last FY (\$)	Company Contributions in Last FY (\$)(1)	Aggregate Earnings in Last FY (\$)(2)	Aggregate Withdrawals/ Distributions (\$)	Aggregate Balance at Last FYE (\$)(3)
Belgacem Chariag	—	0	0	0	0
Michael Crews	—	22,869	(738)	0	30,772
Scott Randolph	—	14,750	(5,137)	0	205,689
David J. Taylor	—	0	0	0	0
Paul Ferrall	—	25,668	(2,758)	0	148,435
James Gentilcore	—	43,610	(406)	0	49,568

(1) Represents Company contributions with respect to 2018 that were credited in 2019. These amounts are included in the "All other compensation" column of the "Summary Compensation Table" above.

(2) Earnings are credited quarterly, based on the returns of the appropriate Vanguard Retirement Fund.

(3) Represents balances under the PRA SERP plan as of December 31, 2018 and does not include amounts attributable to Company contributions made with respect to 2018 but not credited until 2019.

**Potential Payments Upon Termination or Change in Control**

**Cash Severance**

Each of our named executive officers, except Mr. Taylor, is party to a severance agreement with us that provides them with severance protections and benefits in the event of certain qualifying terminations of their employment. Mr. Taylor was provided with a severance benefit in connection with his offer of employment.

The terms of Mr. Gentilcore's separation agreement, along with the forms and amounts of actual severance paid, are discussed above in the section entitled "Transition and Severance Arrangement with Mr. Gentilcore."

The severance agreements for Messrs. Chariag, Crews, Randolph and Ferrall provide for the severance payments and benefits described below in connection with specified termination events, subject to the named executive officer's execution and non-revocation of a release of claims and continued compliance with the restrictive covenants described below. The terms "cause", "good reason" and "disability" are each defined in the applicable severance agreements.

Under the terms of their severance agreements, in the event of a termination of the named executive officer's employment by the Company without cause or by the named executive officer with good reason, each of Messrs. Chariag, Crews, Randolph and Ferrall will receive: (i) his base salary and target annual incentive bonus for a two-year period following termination paid (A) in the case of Messrs. Chariag and Crews in equal installments over such two-year period in accordance with the normal payroll practices of the Company, and (B) in the case of Messrs. Randolph and Ferrall, following termination in accordance

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with the terms of the severance agreements; (ii) a pro rata amount of the annual incentive bonus that would have been payable in the year of termination based on the number of days the named executive officer was employed during the calendar year and subject to the Company's achievement of applicable performance goals, which amount will be paid in a lump sum at the time annual bonuses under the PQIP are normally paid; and (iii) continuation of health benefits at active employee rates for 24 months (or until the named executive officer otherwise becomes eligible for health benefits as a result of commencing new employment) to the extent permitted by the applicable benefit plan, or reimbursement of the costs for such coverage under COBRA.

If Mr. Chariag's employment is terminated by the Company without cause or by him with good reason, in each case, within the one year following a change in control of the Company, in addition to the severance payments and benefits described above, he will also be entitled to a payment equal to the sum of his base salary and target annual incentive bonus paid in a lump sum on the second anniversary of the date his employment terminates.

If the employment of Messrs. Chariag, Crews, Randolph or Ferrall is terminated due to death or disability, the individual (or his estate) will receive a pro rata amount of his target annual incentive bonus.

In the event that all or any portion of the payments or benefits provided under the severance agreement would constitute an "excess parachute payment" within the meaning of Section 280G of the Internal Revenue Code, the named executive officer will be entitled to receive an amount equal to the greater of (on an after-tax basis) (i) the amount of such payments or benefits reduced so that no portion of the payments and benefits would fail to be deductible under Section 280G, or (ii) the amount otherwise payable reduced by all taxes, including the excise tax imposed under Section 4999 of the Internal Revenue Code.

The severance agreements with each of Messrs. Chariag, Crews, Randolph and Ferrall contain restrictive covenants for the benefit of the Company, including two-year post termination non-compete and non-solicitation covenants, a prohibition of disclosure of confidential information, and an assignment of inventions and patents to the Company.

Mr. Taylor's severance benefit is outlined in his letter of employment. If Mr. Taylor's employment is terminated by the Company without cause, subject to his execution of a general release of claims, he is entitled to continued base salary and health benefits at the active employee contribution rate for the 12-month period following the date of termination.

Mr. Gentilcore resigned from his positions as Executive Chairman of the Company and as Chairman and member of the Company's Board of Directors as of December 31, 2018. In connection with his departure, Mr. Gentilcore and the Company entered into a separation and general release agreement, dated December 21, 2018 under which Mr. Gentilcore agreed to a general release of claims in favor of the Company in exchange for continued payment of his annual base salary (\$880,000) and annual target bonus (\$880,000) over the two year period from January 1, 2019 to December 31, 2020 (an aggregate amount of \$3,520,000), relocation expenses (\$17,820) and continuation of the Company contributions for medical, vision and dental benefits over the same period (based, for the purposes of valuation, on the Company's contribution rates as in effect on December 31, 2018, \$32,640) unless he becomes entitled to these benefits from a new employer. In addition, Mr. Gentilcore was entitled to accelerated vesting as of December 31, 2018 of all of his outstanding and unvested time-based equity awards (the value of which, based on the closing price per share of our common stock on December 31, 2018 of \$14.81, is \$7,119,581); the ability to exercise all vested stock options for their full term; the continued eligibility for vesting under the terms of the relevant award agreements with respect to outstanding performance-based stock options and restricted stock during the period beginning January 1, 2019 and ending December 31, 2020 (an aggregate of 33,480 performance-based shares of restricted stock and 118,222 stock options); and the grant of fully-vested shares of stock with a grant date value of \$200,000. Mr. Gentilcore's entitlement to these payments and benefits is subject to his continuing compliance with the terms of the severance agreement, including the restrictive covenants contained in his severance agreement, and separation and release agreement.

## Equity Awards

Equity awards subject to time vesting will vest and, as applicable, become exercisable upon a change of control of the Company. Equity awards subject to performance vesting based on the MOI Target will vest and, as applicable, become exercisable upon a change of control only if such change of control results in the MOI Target being satisfied.

Upon a termination of the named executive officer's employment due to death, disability, retirement, without cause, or for good reason (if applicable), equity awards subject to performance vesting based on the MOI Target will vest, and as applicable, become exercisable, only if the MOI Target is satisfied on or before the six month anniversary of the termination of employment.

With respect to restricted stock units granted in 2017 and 2018, and outstanding stock options, there would be no acceleration of vesting on a termination of employment prior to the applicable vesting date of the award.

The table below shows the estimated value of the severance benefits that each of our currently employed named executive officers would have been entitled to receive if his employment was terminated by us without cause or by the named executive officer for good reason or the termination was due to death, disability or retirement. The table below assumes that such termination occurred on December 31, 2018. The table below also shows the estimated value associated with the acceleration of certain outstanding equity awards upon a change of control of the Company, assuming that such change of control occurred on December 31, 2018. The actual amounts that would be paid to any named executive officer can only be determined at the time an actual termination of employment or change of control occurs and could vary from those listed below.

Termination without Cause or for Good Reason without a Change in Control				
Executive	Severance Pay \$(1)	Benefits \$(2)	Equity Acceleration \$(3)	Total (\$)
Belgacem Chariag	\$ 3,520,000	\$ 47,147	—	\$ 3,567,147
Michael Crews	\$ 1,680,000	\$ 29,470	\$ 502,877	\$ 2,212,347
Scott Randolph	\$ 1,680,000	\$ 32,640	—	\$ 1,712,640
David J. Taylor	\$ 480,000	\$ 16,320	—	\$ 496,320
Paul Ferrall	\$ 1,680,000	\$ 32,640	—	\$ 1,712,640

  

Change of Control Only, no Termination				
Executive	Severance Pay \$(1)	Benefits \$(2)	Equity Acceleration \$(3)	Total (\$)
Belgacem Chariag	—	—	—	—
Michael Crews	—	—	\$ 713,922	\$ 713,922
Scott Randolph	—	—	—	—
David J. Taylor	—	—	—	—
Paul Ferrall	—	—	—	—

Executive	Termination due to Death, Disability or Retirement			
	Severance Pay \$(1)	Benefits \$(2)	Equity Acceleration \$(3)	Total (\$)
<b>Belgacem Chariag</b>	—	—	—	—
<b>Michael Crews</b>	—	—	\$ 502,877	\$ 502,877
<b>Scott Randolph</b>	—	—	—	—
<b>David J. Taylor</b>	—	—	—	—
<b>Paul Ferrall</b>	—	—	—	—

- (1) Represents the cash severance amounts that would have been payable as a result of the event described in the table above, based on the named executive officer's base salary and target bonus amount in effect as of December 31, 2018, and without including any accrued but unpaid compensation, paid time-off or any bonus earned with respect to 2018 performance (pro rata or otherwise). The cash severance amounts that would have been payable to each of our named executive officers in connection with a termination of employment under various circumstances are described in more detail above.
- (2) Represents the estimated value of the Company-paid portion of the premium for medical and dental insurance for the applicable period (based on the Company's contribution rates as in effect on December 31, 2018).
- (3) Reflects the accelerated vesting of Mr. Crews' unvested time-vesting restricted shares and/or stock options that would have vested upon termination or a change of control pursuant to the terms of the award agreements governing such unvested awards outstanding as of December 31, 2018, assuming a price per share of \$14.81, which was the closing price of a share of our Common Stock on December 31, 2018, the last business day of fiscal year 2018, as reported on the NYSE. No amounts have been included in respect of performance-based stock options or restricted shares since the MOI Target associated with such awards would not have been satisfied at these share prices.

### CEO Pay Ratio

As required by SEC rules, we are providing the following information about the relationship of the annual total compensation of our employees and the annual total compensation of our Chief Executive Officer. This pay ratio is a reasonable estimate calculated in a manner consistent with Item 402(u) of Regulation S-K. Because the SEC rules for identifying the median compensated employee and calculating the pay ratio based on that employee's annual total compensation allow companies to adopt a variety of methodologies, to apply certain exclusions, and to make reasonable estimates and assumptions that reflect their compensation practices, the pay ratio reported by other companies may not be comparable to the pay ratio reported below.

The median of the annual total compensation of all employees in our Company for 2018, except for our Chief Executive Officer, was \$69,124. The total annualized compensation for our Chief Executive Officer for 2018 was \$4,270,176. The resulting 2018 ratio of annual total compensation of our Chief Executive officer to the median of the annual total compensation of all of our other employees is estimated to be 62:1.

We chose a measurement date of December 31, 2018 for identifying our median employee. We examined the annual base salary or base rate of pay of all our employees, excluding our Chief Executive Officer, who were employed by us on December 31, 2018. We included all U.S. and non-U.S. employees who worked full-time, part-time or as interns. The use of annual base salary or base rate of pay is a consistently applied compensation measure that we believe reasonably reflects the compensation for our employee population.

In the cases where a full-time or a regular scheduled part-time employee was employed on December 31, 2018, but was not employed by the Company for all of 2018, the base salary or base rate of pay was annualized. Regular scheduled part-time employees were not converted into full-time equivalents. Annual base salary or base rate of pay, as applicable, includes overtime, shift premium, vacation and paid sick time. The base salaries or base rates of pay of non-U.S. employees were converted into U.S. dollars using the Company's internal year to date average exchange rates.



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After identifying the median employee based on the above methodology, we calculated that individual's total annual compensation using the same methodology set forth in the 2018 Summary Compensation Table in this proxy statement. We annualized the Chief Executive Officer's compensation because he joined our Company on August 9, 2018. For this reason, the compensation of the Chief Executive Officer used for purposes of calculating the pay ratio is higher than that reported in the Summary Compensation Table.

**Equity Compensation Plan Information**

The following table gives information, as of December 31, 2018, about our Common Stock that may be issued upon the exercise of options and settlement of other equity awards under all compensation plans under which equity securities are reserved for issuance. The SIP and the 2017 Plan are our only equity compensation plans pursuant to which our equity securities are authorized for issuance.

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity compensation plans approved by security holders	4,136,562 <sup>(1)</sup>	\$ 10.79 <sup>(2)</sup>	5,396,119 <sup>(3)</sup>
Equity compensation plans not approved by security holders	0	0	0
<b>Total</b>	<b>4,136,562</b>	<b>\$ 10.79</b>	<b>5,396,119</b>

- (1) Represents the number of underlying shares of our Common Stock associated with outstanding options and restricted stock units under stockholder approved plans and includes 2,078,091 stock options granted under the SIP, 863,063 stock options granted under the 2017 Plan, and 1,195,408 restricted stock units granted under the 2017 Plan, including 196,622 shares underlying restricted stock units that were vested as of December 31, 2018, but settled on January 3, 2019.
- (2) Represents weighted-average exercise price of options outstanding under the SIP and the 2017 Plan. See note (1) above with respect to restricted stock units granted under the 2017 Plan. The weighted-average exercise price does not take these awards into account.
- (3) Represents the number of underlying shares of our Common Stock authorized for issuance under future equity awards granted under the 2017 Plan.

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## PROPOSAL 2 — ADVISORY VOTE ON EXECUTIVE COMPENSATION

As required by Section 14A of the Securities Exchange Act of 1934, we are offering our stockholders an opportunity to cast an advisory vote on the compensation of our named executive officers, as disclosed in this proxy statement. Although the vote is non-binding, we value continuing and constructive feedback from our stockholders on compensation and other important matters. Our Board and the Compensation Committee expect to consider the voting results when making future compensation decisions.

As described in the “Compensation Discussion and Analysis” section of this proxy statement, we believe that our executive compensation program enables us to attract, retain, and motivate a high-performing executive management team that improves our fundamental financial performance and provides value to the Company and its stockholders.

We ask for your advisory vote on the following resolution:

“RESOLVED, that the stockholders hereby approve the compensation of PQ Group Holdings Inc. named executive officers, as described in this proxy statement pursuant to the compensation disclosure rules of the Securities and Exchange Commission.”

Generally, approval of any matter presented to stockholders requires the affirmative vote of the holders of a majority of the shares of Common Stock represented at the Annual Meeting and voting on the matter. However, because this vote is advisory and non-binding there is no “required” vote that would constitute approval.

**Your Board unanimously recommends that you vote “FOR” approval of this proposal.**

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## AUDIT COMMITTEE MATTERS

### Audit Committee Report

*The information contained in this report shall not be deemed to be “soliciting material” or “filed” or incorporated by reference in future filings with the Securities and Exchange Commission, or subject to the liabilities of Section 18 of the Exchange Act except to the extent that the Company specifically incorporates it by reference into a document filed under the Securities Act or the Exchange Act.*

We operate in accordance with a written charter adopted by the Board and reviewed annually by the Committee. We are responsible for overseeing the quality and integrity of PQ’s accounting, auditing and financial reporting practices. In accordance with the rules of the Securities and Exchange Commission and the New York Stock Exchange, the Audit Committee is composed entirely of members who are independent, as defined by the listing standards of the New York Stock Exchange and PQ’s Corporate Governance Guidelines. Further, the Board has determined that one of our members (Ms. Ross) is an audit committee financial expert as defined by the rules of the Securities and Exchange Commission.

The Audit Committee met five times during fiscal 2018 with PQ’s management and PricewaterhouseCoopers LLP (“PwC”), PQ’s independent registered public accounting firm, including, but not limited to, meetings held to review and discuss the annual audited and quarterly financial statements and the Company’s earnings press releases.

We believe that we fully discharged our oversight responsibilities as described in our charter, including with respect to the audit process. We received the written disclosures and the letter from PwC pursuant to Rule 3526, Communication with Audit Committees Concerning Independence, of the Public Company Accounting Oversight Board (“PCAOB”) concerning any relationships between PwC and PQ and the potential effects of any disclosed relationships on PwC’s independence, and discussed with PwC its independence. We discussed with management, the internal auditors and PwC PQ’s internal control over financial reporting and the internal audit function’s organization, responsibilities, budget and staffing. We reviewed with both PwC and our internal auditors their audit plans, audit scope, identification of audit risks and their audit efforts.

We discussed and reviewed with PwC their communications required by the Standards of the PCAOB and, with and without management present, discussed and reviewed the results of PwC’s examination of PQ’s financial statements. We also discussed the results of the internal audit examinations with and without management present.

We reviewed the audited consolidated financial statements of PQ as of and for the fiscal year ended December 31, 2018 with Management and PwC. Management has the responsibility for the preparation of PQ’s financial statements, and PwC has the responsibility for the audit of those statements.

Based on these reviews and discussions with management and PwC, we approved the inclusion of PQ’s audited financial statements in its Annual Report on Form 10-K for the year ended December 31, 2018 for filing with the Securities and Exchange Commission. We also have selected PwC as the independent registered public accounting firm for the year ended December 31, 2019, subject to ratification by PQ’s stockholders.

Audit Committee

**Kimberly Ross, Chairperson**  
**Robert Coxon**  
**Kyle Vann**

**Audit and Other Fees**

The aggregate fees that PQ paid for professional services rendered by PwC for the fiscal year ended December 31, 2018 (fiscal 2018) and the fiscal year ended December 31, 2017 (fiscal 2017) were:

	Fiscal 2018	Fiscal 2017
Audit	\$ 3,224,000	\$ 2,615,000
Audit Related	\$ 17,845	\$ 1,718,000
Tax	\$ 1,112,000	\$ 1,488,536
All Other	\$ 2,700	\$ 2,754
<b>Total</b>	<b>\$ 4,356,545</b>	<b>\$ 5,824,290</b>

- Audit fees were for professional services rendered for the audit of our annual audited consolidated financial statements and review of our quarterly financial statements, advice on accounting matters directly related to the audit and audit services, and assistance with review of documents filed with the Securities and Exchange Commission.
- Audit related fees were primarily for services related to compilation of statutory financial statements.
- Tax fees were for professional services related to tax compliance and tax consulting services, including assistance with tax audits.
- All other fees were for software license fees.

The Audit Committee pre-approves all audit services and all permitted non-audit services, including engagement fees and terms, to be provided by the independent auditors. Our policies prohibit PQ from engaging PwC to provide any non-audit services prohibited by applicable Securities and Exchange Commission rules. In addition, we evaluate whether PQ's use of PwC for permitted non-audit services is compatible with maintaining PwC's independence and objectivity. After review of the non-audit services provided, we concluded that PwC's provision of these non-audit services, all of which were approved in advance, is compatible with its independence.

**PROPOSAL 3**

**RATIFICATION OF APPOINTMENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

The Audit Committee of our Board has appointed PricewaterhouseCoopers LLP ("PwC") as our independent registered public accounting firm for the fiscal year ended December 31, 2019. We are asking stockholders to ratify this appointment. PwC has served as our independent registered public accounting firm since 2015. Representatives of PwC will attend the Annual Meeting, where they will have the opportunity to make a statement if they wish to do so and will be available to answer questions from the stockholders.

**The Board recommends a vote FOR Proposal 3, Ratification of Appointment of Independent Registered Public Accounting Firm.**

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## OTHER INFORMATION

### Stockholder Proposals for the 2020 Annual Meeting

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Our stockholders may submit a proposal to be considered for a vote at our 2020 annual meeting of stockholders. If you wish to submit a proposal for consideration, you should adhere to the following procedures as prescribed in our Bylaws or Rule 14a-8 under the Exchange Act ("Rule 14a-8").

Under Rule 14a-8, a stockholder who intends to present a proposal at the 2020 annual meeting of stockholders and who wishes the proposal to be included in the proxy materials for that meeting must submit the proposal in writing to us so that it is received by our Secretary no later than November 27, 2019. Please refer to Rule 14a-8 for the requirements that apply to these proposals. Any proposals received after this date will be considered untimely under Rule 14a-8. Written proposals may be mailed to us at PQ Group Holdings Inc., 300 Lindenwood Drive, Malvern, Pennsylvania 19355, Attn: Secretary.

In addition, a stockholder may nominate a director or present any other proposal at the 2020 annual meeting of stockholders by complying with the requirements set forth in Section 1.2 (Advance Notice of Nominations and Proposals of Business) of our Bylaws by providing written notice of the nomination or proposal to our Secretary no earlier than January 3, 2020 and no later than February 2, 2020. We reserve the right to reject, rule out of order, or take other appropriate action with respect to any proposal that does not comply with these and other applicable requirements. Our Bylaws describe the requirements for submitting proposals at the Annual Meeting. The notice must be given in the manner and must include the information and representations required by our Bylaws.

### Annual Report on Form 10-K

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Our Annual Report on Form 10-K for the year ended December 31, 2018 is available without charge to each stockholder, upon written request to the Secretary at our principal executive offices at 300 Lindenwood Drive, Malvern, Pennsylvania 19355 and is also available by clicking "SEC Filings" in the Investors section of our website, [www.pqcorp.com](http://www.pqcorp.com).

### Stockholder Account Maintenance

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Our transfer agent is American Stock Transfer and Trust Company, LLC ("AST"). All communications concerning accounts of stockholders of record, including address changes, name changes, inquiries as to requirements to transfer PQ stock and similar issues, can be handled by calling AST toll-free at (800) 937-5449 or by accessing AST's website at [www.astfinancial.com](http://www.astfinancial.com).

### Householding of Proxy Materials

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Like many other companies, brokers, banks, and nominee record holders, PQ participates in a practice commonly known as "householding," where a single copy of our Proxy Statement and 2018 Annual Report is sent to one address for the benefit of two or more stockholders sharing that address unless we have received contrary instructions. Householding is permitted under rules adopted by the Securities and Exchange Commission as a means of satisfying the delivery requirements for proxy statements and annual reports, potentially resulting in extra convenience for stockholders and cost savings for companies. If you hold your shares through a broker, you may have consented to reducing the number of copies of materials delivered to your address. In the event you wish to revoke your consent provided to a broker, you must contact that broker to revoke your consent. If you are subject to householding, we will promptly deliver a separate copy of either document to you if you contact our Secretary at PQ Group Holdings Inc., 300 Lindenwood Drive, Malvern, Pennsylvania 19355 or call us at (610) 651-4400. If you receive multiple copies of our Proxy Statement and 2018 Annual Report at your household and wish to receive only one, please notify your broker or contact our Secretary.

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**Other Matters**

At the time of mailing of this Proxy Statement, we do not know of any other matter that may come before the Annual Meeting and do not intend to present any other matter. However, if any other matters properly come before the meeting or any adjournment, the persons named as proxies will have discretionary authority to vote the shares represented by the proxies in accordance with their own judgment, including the authority to vote to adjourn the meeting.

**Directions to Attend the Annual Meeting**

300 Lindenwood Dr.  
Valleybrooke Corporate Center  
Malvern, PA 19355-1740

From Route 202 South:

Take exit toward PA-29 N (0.4m)  
Turn left at E. Swedesford Rd. (0.4m)  
Turn left at PA-29S (0.2m)  
Turn Right at Lindenwood Dr. (0.1m)  
Bear left at Valleybrooke Corporate Center main entrance

From Route 202 North:

Take exit toward PA-29 S toward Malvern (0.2m)  
Turn Right at Morehall Rd./PA-29S (0.1m)  
Turn Right at Lindenwood Dr. (0.1m)  
Bear left at Valleybrooke Corporate Center main entrance

From the Schuylkill Expressway (I-76):

Follow I-76 West to Route 202 South exit (26B)  
After exiting stay in the left lane until it merges with Route 202 South towards West Chester  
Continue on Route 202 South for approximately 5.3 miles, and take exit toward PA-29 N  
Turn left at E. Swedesford Rd. (0.4m)  
Turn left at PA-29S (0.2m)  
Turn Right at Lindenwood Dr. (0.1m)  
Bear left at Valleybrooke Corporate Center main entrance

From the Pennsylvania Turnpike:

Exit at Interchange #326, Valley Forge  
Take Route 202 South exit  
Stay in the left lane until it merges with Route 202 South headed towards West Chester  
Continue on Route 202 South for approximately 5.3 miles, and take exit toward PA-29 N  
Turn left at E. Swedesford Rd. (0.4m)  
Turn left at PA-29S (0.2m)  
Turn Right at Lindenwood Dr. (0.1m)  
Bear left at Valleybrooke Corporate Center main entrance

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From Philadelphia Airport:

- Take I-95 South (towards Delaware) approximately 3 miles
- Take I-476 North (towards Plymouth Meeting) approximately 15 miles
- Take I-76 West to Valley Forge exit
- Follow I-76 West to Valley Forge exit
- Follow I-76 West to Route 202 South
- Take exit toward PA-29 N (0.4m)
- Turn left at E. Swedesford Rd. (0.4m)
- Turn left at PA-29S (0.2m)
- Turn Right at Lindenwood Dr. (0.1m)
- Bear left at Valleybrooke Corporate Center main entrance



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**PQ GROUP HOLDINGS INC.  
VALLEYBROOKE CORPORATE CENTER  
300 LINDENWOOD DRIVE  
MALVERN, PENNSYLVANIA 19355-1740**

**VOTE BY INTERNET - [www.proxyvote.com](http://www.proxyvote.com)**

Use the Internet to transmit your voting instructions and for electronic delivery of information up until 11:59 p.m. Eastern Time on May 1, 2019. Have your proxy card in hand when you access the web site and follow the instructions to obtain your records and to create an electronic voting instruction form.

**VOTE BY PHONE - 1-800-690-6903**

Use any touch-tone telephone to transmit your voting instructions up until 11:59 p.m. Eastern Time on May 1, 2019. Have your proxy card in hand when you call and then follow the instructions.

**VOTE BY MAIL**

Mark, sign and date your proxy card and return it in the postage-paid envelope we have provided or return it to Vote Processing, c/o Broadridge, 51 Mercedes Way, Edgewood, NY 11717.

**ELECTRONIC DELIVERY OF FUTURE PROXY MATERIALS**

If you would like to reduce the costs incurred by our company in mailing proxy materials, you can consent to receiving all future proxy statements, proxy cards and annual reports electronically via e-mail or the Internet. To sign up for electronic delivery, please follow the instructions above to vote using the Internet and, when prompted, indicate that you agree to receive or access proxy materials electronically in future years.

TO VOTE, MARK BLOCKS BELOW IN BLUE OR BLACK INK AS FOLLOWS:

E63387-P17943

KEEP THIS PORTION FOR YOUR RECORDS  
DETACH AND RETURN THIS PORTION ONLY

THIS PROXY CARD IS VALID ONLY WHEN SIGNED AND DATED.

<b>PQ GROUP HOLDINGS INC.</b>		<b>For All</b>	<b>Withhold All</b>	<b>For All Except</b>	To withhold authority to vote for any individual nominee(s), mark "For All Except" and write the number(s) of the nominee(s) on the line below.		
The Board of Directors recommends you vote FOR the following:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>			
1. Election of Directors		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	_____		
<b>Nominees:</b>							
01) Robert Coxon							
02) Mark McFadden							
03) Kimberly Ross							
04) Robert Toth							
<b>The Board of Directors recommends you vote FOR the following Proposals 2 and 3:</b>					<b>For</b>	<b>Against</b>	<b>Abstain</b>
2. To approve, on an advisory basis, the compensation paid by PQ to its named executive officers.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. To ratify the appointment of PricewaterhouseCoopers LLP as PQ's independent registered public accounting firm for the fiscal year ending December 31, 2019.		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>NOTE:</b> Such other business as may properly come before the meeting or any adjournment thereof.							
For address changes and/or comments, please check this box and write them on the back where indicated.				<input type="checkbox"/>			
Please indicate if you plan to attend this meeting				<input type="checkbox"/>		<input type="checkbox"/>	
				<b>Yes</b>		<b>No</b>	
Please sign exactly as your name(s) appear(s) hereon. When signing as attorney, executor, administrator, or other fiduciary, please give full title as such. Joint owners should each sign personally. All holders must sign. If a corporation or partnership, please sign in full corporate or partnership name by authorized officer.							
<input type="text"/>		<input type="text"/>		<input type="text"/>		<input type="text"/>	
Signature [PLEASE SIGN WITHIN BOX]		Date		Signature (Joint Owners)		Date	



**Important Notice Regarding the Availability of Proxy Materials for the Annual Meeting:**  
The Notice and Proxy Statement, Annual Report and Form 10-K are available at [www.proxyvote.com](http://www.proxyvote.com).

E63388-P17943

**PQ GROUP HOLDINGS INC.  
Annual Meeting of Stockholders  
May 2, 2019 10 a.m. EDT  
This proxy is solicited by the Board of Directors**

The undersigned hereby appoints JOSEPH S. KOSCINSKI and WILLIAM J. SICHKO, JR., and each of them (with full power to act alone), as proxies of the undersigned with all the powers the undersigned would possess if present during the 2019 Annual Meeting, and with full power of substitution in each of them to appear, represent and vote all shares of common stock of PQ Group Holdings Inc. which the undersigned would be entitled to vote at the 2019 Annual Meeting of Stockholders, to be held at Valleybrooke Corporate Center, 300 Lindenwood Drive, Malvern, Pennsylvania 19355 on Thursday, May 2, 2019 at 10 a.m. (EDT), and at any adjournment or postponement thereof.

**THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED HEREIN. IF NO DIRECTION IS INDICATED, SUCH SHARES WILL BE VOTED FOR THE ELECTION OF ALL OF THE DIRECTOR NOMINEES LISTED IN PROPOSAL 1, FOR PROPOSAL 2 AND FOR PROPOSAL 3. AS TO ANY OTHER MATTER THAT MAY BE PROPERLY BROUGHT BEFORE THE MEETING OR ANY ADJOURNMENT OR POSTPONEMENT THEREOF, PROXY HOLDERS WILL VOTE IN ACCORDANCE WITH THEIR BEST JUDGMENT.**

**The Board of Directors recommends a vote FOR the election of all director nominees, FOR Proposal 2 and FOR Proposal 3.**

**PLEASE MARK, SIGN, DATE AND RETURN THIS PROXY CARD PROMPTLY USING THE ENCLOSED REPLY ENVELOPE.**

Address Changes/Comments: \_\_\_\_\_  
\_\_\_\_\_

(If you noted any Address Changes/Comments above, please mark corresponding box on the reverse side.)

**CONTINUED AND TO BE SIGNED ON REVERSE SIDE**