

CECO ENVIRONMENTAL CORP
Form 424B3
July 31, 2015
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**Filed pursuant to Rule 424(b)(3)
Registration Statement No. 333-204816**

**4625 Red Bank Road, Suite 200
Cincinnati, Ohio 45227**

**14651 North Dallas Parkway, Suite
500
Dallas, Texas 75254
July 31, 2015**

PROPOSED MERGERS YOUR VOTE IS VERY IMPORTANT

To the Stockholders of CECO Environmental Corp. and PMFG, Inc.:

On May 3, 2015 CECO Environmental Corp. (CECO) and PMFG, Inc. (PMFG) entered into an Agreement and Plan of Merger (the Merger Agreement) pursuant to which CECO will acquire PMFG. The Merger Agreement provides for a business combination in which (a) a wholly owned subsidiary of CECO will merge with and into PMFG (the First Merger), and (b) immediately following the First Merger, PMFG will merge with and into a separate wholly owned subsidiary of CECO (the Second Merger and together with the First Merger, the Mergers). As a result of the Mergers, the separate corporate existence of PMFG will cease, and the wholly owned subsidiary of CECO will continue as the surviving company and a wholly owned subsidiary of CECO.

In the proposed First Merger, each issued and outstanding share of PMFG common stock, including restricted stock, will be converted into the right to receive, at the election of the holder, subject to the proration described below, either (a) \$6.85, in cash, without interest, or (b) a number of shares of CECO common stock equal to an exchange ratio that will provide shares of CECO common stock valued at \$6.85 (based on the volume weighted average trading price of CECO common stock for the 15-trading day period ending on the last trading day before the closing of the First Merger). However, the exchange ratio is subject to a collar so that there will be a maximum exchange ratio of 0.6456 share of CECO common stock for each share of PMFG common stock and a minimum exchange ratio of 0.5282 share of CECO common stock for each share of PMFG common stock. The net effect of the collar mechanism is that no further increase in the exchange ratio will be made if the volume weighted average trading price of CECO common stock is less than \$10.61, and no further decrease in the exchange ratio will be made if such volume weighted average trading price of CECO common stock is greater than \$12.97. On July 30, 2015, the latest practicable date before the printing of the accompanying joint proxy statement/prospectus, the closing price of CECO common stock was \$9.23 per share.

Elections by PMFG stockholders are subject to proration to the extent necessary to provide that \$66.2 million (or approximately 45%) of the aggregate consideration to be paid by CECO in the First Merger will be paid in cash (including approximately \$1.6 million to be paid in cash for all restricted stock units and options outstanding as of the effective time of the First Merger) and the remaining approximately 55% of the aggregate consideration will be paid in shares of CECO common stock. The maximum number of shares of CECO common stock that will be issued in the First Merger is 7,630,000 shares. Based on the number of shares of CECO common stock and PMFG common stock and PMFG equity awards outstanding on July 30, 2015, and assuming the Mergers occurred on that date, PMFG stockholders would hold between 19.0% and 22.3%, in the aggregate, of the issued and outstanding shares of CECO

common stock.

CECO common stock trades on the NASDAQ Global Select Market under the symbol CECE.

CECO will hold a special meeting (the CECO Special Meeting) of its stockholders on September 2, 2015 at 10:30 a.m., Eastern Time, at its executive offices, 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227. At the CECO Special Meeting, CECO s stockholders will be asked to:

1. approve the issuance of CECO common stock to PMFG stockholders in the First Merger (the Share Issuance);
2. approve an amendment to the Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000; and
3. approve the adjournment of the CECO Special Meeting, if necessary or appropriate.

The CECO board of directors unanimously recommends that CECO stockholders vote FOR each of the proposals presented at the CECO Special Meeting.

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Concurrently with the execution of the Merger Agreement, certain significant CECO stockholders entered into a voting agreement with PMFG pursuant to which those stockholders agreed to vote all shares of CECO common stock owned by each of them **FOR** the Share Issuance. At the close of business on the record date for the CECO Special Meeting, these significant stockholders beneficially owned, in the aggregate, 3,936,506 shares of CECO common stock or approximately 14.9% of the shares of CECO common stock outstanding on that date. These same significant stockholders have also agreed to certain restrictions on the sale of their shares of CECO common stock following the Mergers, as further described in the accompanying joint proxy statement/prospectus.

PMFG will hold a special meeting (the PMFG Special Meeting) of its stockholders on September 2, 2015 at 9:00 a.m., Central Time, at PMFG, Inc., 14651 Dallas Parkway, Suite 500, Dallas, TX 75254. At the PMFG Special Meeting, PMFG s stockholders will be asked to:

1. adopt the Merger Agreement;
2. approve the compensation that may become payable to PMFG s named executive officers in connection with the Mergers; and
3. approve specified proposals made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting.

The PMFG board of directors unanimously recommends that PMFG stockholders vote FOR each of the proposals presented at the PMFG Special Meeting.

YOUR VOTE IS VERY IMPORTANT. Whether or not you plan to attend the CECO Special Meeting or the PMFG Special Meeting, as applicable, please take the time to vote over the Internet or by telephone as described in the accompanying joint proxy statement/prospectus or by completing the enclosed proxy card and mailing it in the enclosed envelope. Information about the meetings, the Mergers and the other business to be considered at the meetings is contained in the accompanying joint proxy statement/prospectus. You are urged to read the accompanying joint proxy statement/prospectus, including any documents incorporated by reference, carefully and in its entirety.

In particular, you should carefully read Risk Factors beginning on page 39 for a discussion of certain of the material risks to consider in evaluating the Merger Agreement and the Mergers and how they will affect you.

Thank you for your cooperation and continued support.

Sincerely,

Jeffrey Lang

Chief Executive Officer

Peter J. Burlage

Chairman and Chief Executive Officer

CECO Environmental Corp.

PMFG, Inc.

Neither the Securities and Exchange Commission nor any state securities regulator has approved or disapproved the Merger Agreement and the Mergers described in the accompanying joint proxy statement/prospectus or the CECO common stock to be issued in the First Merger or passed upon the adequacy or accuracy of the accompanying joint proxy statement/prospectus. Any representation to the contrary is a criminal offense.

The accompanying joint proxy statement/prospectus is dated July 31, 2015 and is first being mailed to CECO and PMFG stockholders on or about August 4, 2015.

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REFERENCES TO ADDITIONAL INFORMATION

This joint proxy statement/prospectus incorporates by reference important business and financial information about each of CECO and PMFG from documents that each company has filed with the SEC but that are not included in or delivered with this joint proxy statement/prospectus. You may read and copy any report, statement or other information that CECO and PMFG file with the SEC at the SEC's public reference room at the following location: Public Reference Room, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. This information is available to you without charge upon your oral or written request. You can obtain the documents incorporated by reference into this joint proxy statement/prospectus by requesting them in writing or by telephone from the appropriate company at the following addresses and telephone numbers:

CECO Environmental Corp.

4625 Red Bank Road, Suite 200

Cincinnati, Ohio 45227

Attention: Investor Relations

Telephone: (513) 458-2600

www.cecoenviro.com

All website addresses given in this joint proxy statement/prospectus are for informational purposes only and are not intended to be active links and information contained on the websites of CECO or PMFG is not incorporated by reference in, nor considered to be part of, this joint proxy statement/prospectus.

PMFG, Inc.

14651 North Dallas Parkway, Suite 500

Dallas, Texas 75254

Attention: Investor Relations

Telephone: (214) 357-6181

www.pmfginco.com

If you would like to request documents, please do so by August 26, 2015 in order to receive them before the meetings.

For more detailed description of the information incorporated by reference into this joint proxy statement/prospectus and how you can obtain it, please see *Where You Can Find More Information* beginning on page 223.

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NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD SEPTEMBER 2, 2015

To Our Stockholders:

A special meeting of stockholders of CECO Environmental Corp., a Delaware corporation (CECO), will be held at our executive offices, 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227 on September 2, 2015 at 10:30 a.m., Eastern Time. The special meeting of stockholders (the CECO Special Meeting) is being held for the following purposes:

1. to approve the issuance (the Share Issuance) of CECO common stock, \$0.01 par value, to stockholders of PMFG, Inc., a Delaware corporation (PMFG), in the transactions contemplated by the Agreement and Plan of Merger, dated as of May 3, 2015 (the Merger Agreement), by and among CECO, Top Gear Acquisition Inc., a wholly owned subsidiary of CECO (Merger Sub I), Top Gear Acquisition II LLC, a separate wholly owned subsidiary of CECO (Merger Sub II) and PMFG, pursuant to which (a) Merger Sub I will merge with and into PMFG (the First Merger) and (b) immediately following the First Merger, PMFG will merge with and into Merger Sub II (the Second Merger and together with the First Merger, the Mergers) (CECO Proposal No. 1);
2. to approve an amendment to the Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan (the Incentive Plan) to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, as set forth in the Second Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan, a copy of which is attached to the accompanying joint proxy statement/prospectus as Annex D (CECO Proposal No. 2); and
3. to approve the adjournment of the CECO Special Meeting, if necessary or appropriate (CECO Proposal No. 3).

The above matters are more fully described in the accompanying joint proxy statement/prospectus of CECO and PMFG, which provides you with information about the CECO Special Meeting, the Share Issuance, the Mergers and other related matters. The accompanying joint proxy statement/prospectus also includes, as Annex A, a copy of the Merger Agreement. CECO encourages you to carefully read the accompanying joint proxy statement/prospectus in its entirety, including the annexes and the documents incorporated by reference.

Only holders of CECO common stock as of the close of business on July 30, 2015, which is the record date for the CECO Special Meeting, are entitled to receive notice of and to vote at the CECO Special Meeting.

We hope that as many stockholders as possible will personally attend the CECO Special Meeting. Whether or not you plan to attend the CECO Special Meeting, please complete the enclosed proxy card and sign, date and return it promptly so that your shares will be represented. You also may vote your shares over the Internet or by telephone by following the instructions included on the proxy card. Submitting your proxy in writing, over the Internet or by telephone will not prevent you from voting in person at the CECO Special Meeting. The affirmative vote of a majority of the votes present, in person or by proxy, and entitled to vote at the CECO Special Meeting will be required (a) to approve the Share Issuance, (b) the amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, and (c) to approve the adjournment of the CECO Special Meeting, if necessary or appropriate. **The CECO board of directors unanimously recommends that CECO stockholders vote FOR each of the proposals presented at the CECO Special Meeting.**

By Order of the CECO Board of Directors,

Jeffrey Lang
Chief Executive Officer

STOCKHOLDERS WHO CANNOT ATTEND IN PERSON ARE REQUESTED TO VOTE

AS PROMPTLY AS POSSIBLE

July 31, 2015

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NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD SEPTEMBER 2, 2015

To Our Stockholders:

A special meeting of stockholders of PMFG, Inc. ("PMFG") will be held at PMFG, Inc., 14651 Dallas Parkway, Suite 500, Dallas, TX 75254 on September 2, 2015 at 9:00 a.m., Central Time. The special meeting of stockholders (the "PMFG Special Meeting") is being held for the following purposes:

1. to adopt the Agreement and Plan of Merger, dated as of May 3, 2015 (the "Merger Agreement"), by and among PMFG, CECO Environmental Corp. ("CECO"), Top Gear Acquisition Inc., a wholly owned subsidiary of CECO ("Merger Sub I"), and Top Gear Acquisition II LLC, a separate wholly owned subsidiary of CECO ("Merger Sub II"), pursuant to which (a) Merger Sub I will merge with and into PMFG (the "First Merger") and (b) immediately following the First Merger, PMFG will merge with and into Merger Sub II (the "Second Merger") and together with the First Merger, the "Mergers") (PMFG Proposal No. 1);
2. to approve the compensation that may become payable to PMFG's named executive officers in connection with the Mergers (PMFG Proposal No. 2); and
3. to approve any proposal made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting (PMFG Proposal No. 3).

The above matters are more fully described in the accompanying joint proxy statement/prospectus of PMFG and CECO, which provides you with information about PMFG, CECO, the Mergers, documents related to the Mergers, the Share Issuance, the PMFG Special Meeting and other related matters. The accompanying joint proxy statement/prospectus also includes, as Annex A, a copy of the Merger Agreement. PMFG encourages you to carefully read the accompanying joint proxy statement/prospectus in its entirety, including the annexes and the documents incorporated by reference.

Only holders of PMFG common stock as of the close of business on July 30, 2015, which is the record date for the PMFG Special Meeting, are entitled to receive notice of and to vote at the PMFG Special Meeting.

We hope that as many stockholders as possible will personally attend the PMFG Special Meeting. Whether or not you plan to attend the PMFG Special Meeting, please complete the enclosed proxy card and sign, date and return it promptly so that your shares will be represented. You also may vote your shares over the Internet or by telephone by following the instructions included on the proxy card. Submitting your proxy in writing, over the Internet or by telephone will not prevent you from voting in person at the PMFG Special Meeting.

Adoption of the Merger Agreement requires the affirmative vote of the holders of a majority of the shares of PMFG common stock outstanding as of the close of business on the record date for the PMFG Special Meeting. The affirmative vote of a majority of the votes present, in person or by proxy, and entitled to vote at the PMFG Special Meeting will be required (a) to approve the compensation that may become payable to PMFG's named executive officers in connection with the Mergers and (b) to approve any proposal made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting. Because the compensation vote is advisory, it will not be binding on PMFG, and failure to receive the vote required for approval will not change PMFG's obligations to pay the merger-related compensation. **The PMFG board of directors unanimously recommends that PMFG stockholders**

vote FOR each of the proposals presented at the PMFG Special Meeting.

By Order of the PMFG Board of Directors,

Peter Burlage

Chairman and Chief Executive Officer

STOCKHOLDERS WHO CANNOT ATTEND IN PERSON ARE REQUESTED TO VOTE

AS PROMPTLY AS POSSIBLE

July 31, 2015

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CERTAIN DEFINED TERMS USED IN THIS JOINT PROXY STATEMENT/PROSPECTUS

Certificate of Merger	Certificate of merger satisfying the applicable requirements of the Delaware General Corporation Law, to be filed in connection with the First Merger
Cash Consideration	The consideration payable in cash in respect of a share of PMFG common stock in an amount equal to \$6.85. Subject to the proration provisions discussed in this joint proxy statement/prospectus, at the Effective Time of the First Merger, each share of PMFG common stock for which the holder has elected to receive the Cash Consideration will be converted into the right to receive the Cash Consideration
CECO	CECO Environmental Corp., a Delaware corporation
CECO Average Trading Price	The volume weighted average trading price of a share of CECO common stock on NASDAQ for the 15 consecutive trading days ending on the trading day immediately preceding the closing date of the First Merger, as calculated by Bloomberg Financial LP under the function VWAP
CECO Board	The board of directors of CECO
Code	The Internal Revenue Code of 1986, as amended
Commitment Letter	The Commitment Letter, dated May 3, 2015, from Bank of America, N.A. and Merrill Lynch, Pierce, Fenner & Smith Incorporated to CECO
Confidentiality Agreement	The Mutual Confidentiality Agreement, dated as of November 6, 2013, between Peerless Mfg. Co., a subsidiary of PMFG, and CECO
DOJ	U.S. Department of Justice
DGCL	Delaware General Corporation Law
Dissenting Shares	Shares of PMFG common stock issued and outstanding immediately prior to the Effective Time that are held by any holder who has not voted

in favor of the Mergers and who is entitled, pursuant to Section 262 of the DGCL, to demand and properly demands appraisal of those shares

DLLCA

Delaware Limited Liability Company Act

Effective Time

The time at which the Certificate of Merger is filed with the State of Delaware in connection with the First Merger, or such other time specified by mutual agreement of the parties to the Merger Agreement

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Election Deadline	The deadline for each PMFG stockholder to submit an election choosing the form of Merger Consideration that PMFG stockholder elects to receive in the First Merger in respect of the shares of PMFG common stock held by that stockholder. Unless otherwise agreed by CECO and PMFG, the Election Deadline is 5:00 p.m., Eastern Time, on September 1, 2015
Exchange Act	Securities Exchange Act of 1934, as amended
Exchange Ratio	The ratio that will be used to determine the number of shares of CECO common stock to be issued in respect of a share of PMFG common stock that will comprise the Stock Consideration. The Exchange Ratio will be determined by dividing (a) \$6.85 by (b) the CECO Average Trading Price. The Exchange Ratio is subject to a collar, meaning that the Exchange Ratio will not be less than 0.5282 share of CECO common stock for each share of PMFG common stock, and will not be greater than 0.6456 share of CECO common stock for each share of PMFG common stock
First Merger	The merger of Merger Sub I with and into PMFG, with PMFG surviving the merger as a direct wholly owned subsidiary of CECO
FTC	The Federal Trade Commission
HSR Act	The Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended
Incentive Plan	CECO's 2007 Equity Incentive Plan, as amended and restated from time to time
Lock-Up Agreements	The Lock-Up Agreements, dated May 3, 2015, delivered to PMFG by each of Jason DeZwirek and Icarus Investment Corp., which will become effective upon the closing of the First Merger
Merger Agreement	Agreement and Plan of Merger, dated as of May 3, 2015, as it may be amended from time to time, by and among CECO, PMFG, Merger Sub I and Merger Sub II
Merger Consideration	With respect to a given share of PMFG common stock, the right to receive either the Cash Consideration or the Stock Consideration

Merger Sub I	Top Gear Acquisition Inc., a Delaware corporation and a wholly owned direct subsidiary of CECO
Merger Sub II	Top Gear Acquisition II LLC, a Delaware limited liability company and a wholly owned direct subsidiary of CECO
Merger Subs	Merger Sub I and Merger Sub II
Mergers	First Merger and Second Merger, collectively

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Met-Pro	Met-Pro Corporation, a Pennsylvania corporation CECO acquired on August 27, 2013
NASDAQ	The Nasdaq Global Select Market
PMFG	PMFG, Inc., a Delaware corporation
PMFG Board	The board of directors of PMFG
PMFG Options	Options to acquire shares of PMFG common stock
PMFG RSUs	Restricted stock units for shares of PMFG common stock
SEC	U.S. Securities and Exchange Commission
Second Merger	The merger of PMFG (as the surviving entity of the First Merger) with and into Merger Sub II, with Merger Sub II surviving the merger as a wholly owned direct subsidiary of CECO
Securities Act	The Securities Act of 1933, as amended
Share Issuance	The issuance of shares of CECO common stock to PMFG stockholders as the aggregate Stock Consideration in the First Merger
Stock Consideration	The consideration payable in respect of a share of PMFG common stock that will be payable in shares of CECO common stock, which consideration will consist of a number of shares of CECO common stock equal to the Exchange Ratio, plus cash (without interest) in lieu of any fractional share of CECO common stock that would otherwise be issued. Subject to the proration provisions discussed in this joint proxy statement/prospectus, at the Effective Time of the First Merger, each share of PMFG common stock for which the holder has elected to receive Stock Consideration will be converted into the right to receive the Stock Consideration.
Voting Agreement	The Voting Agreement, dated May 3, 2015, as it may be amended from time to time, by and among PMFG, Jason DeZwirek and Icarus

Investment Corp.

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QUESTIONS AND ANSWERS ABOUT THE CECO SPECIAL MEETING

The CECO Board is soliciting proxies from its stockholders to vote at a special meeting of CECO stockholders, to be held at 10:30 a.m. (Eastern Time), on September 2, 2015 at CECO's executive offices, located at 4625 Red Bank Road, Suite 200, Cincinnati, OH 45227 (the CECO Special Meeting), and any adjournment of the CECO Special Meeting, if necessary or appropriate.

The questions and answers below highlight selected information from this joint proxy statement/prospectus and are intended to briefly address some commonly asked questions about, among other things, (a) the Merger Agreement, the Merger Consideration and the Share Issuance, (b) the First Merger, pursuant to which the separate corporate existence of Merger Sub I will cease and PMFG will survive the First Merger as a wholly owned subsidiary of CECO, (c) the Second Merger, pursuant to which the separate corporate existence of PMFG will cease and Merger Sub II will survive the Second Merger as a wholly owned subsidiary of CECO, and (d) the CECO Special Meeting, where the stockholders of CECO will be asked to consider and vote on the approval of the Share Issuance and related matters.

The following questions and answers do not contain all of the information that is important to you. You should carefully read this joint proxy statement/prospectus in its entirety, including the annexes and the documents incorporated by reference, to fully understand the matters to be acted upon and the voting procedures for the CECO Special Meeting. You may obtain the information incorporated by reference into this joint proxy statement/prospectus without charge by following the instructions under *Where You Can Find More Information* beginning on page 223.

For certain questions and answers about the PMFG Special Meeting, see *Questions and Answers About the Mergers and the PMFG Special Meeting* beginning on page 13.

Q. Why have I received this joint proxy statement/prospectus?

- A.** You are receiving this joint proxy statement/prospectus because you were a stockholder of CECO as of the close of business on the record date for the CECO Special Meeting. On May 3, 2015, the CECO Board and PMFG Board each approved the Merger Agreement, providing for PMFG to be acquired by CECO. A copy of the Merger Agreement is attached to this joint proxy statement/prospectus as Annex A, which CECO encourages you to review.

In order to consummate the Mergers, CECO stockholders must approve the issuance of shares of CECO common stock, or the Share Issuance, as part of the consideration for the Mergers. Approval of the Share Issuance requires the affirmative vote of the holders of a majority of the shares present, in person or by proxy, and entitled to vote at the CECO Special Meeting. The CECO Board has designated Jonathan Pollack and Jason DeZwirek as proxies, who will vote the shares represented by proxies at the CECO Special Meeting in the manner indicated by the proxies.

This joint proxy statement/prospectus is being delivered to you as a proxy statement because the CECO Board and the PMFG Board are soliciting proxies from their respective stockholders. The CECO Board is soliciting proxies from its stockholders to vote on the approval of the Share Issuance, as well as the other matters set forth in the notice of the CECO Special Meeting and described in this joint proxy statement/prospectus, and your proxy will be used at the CECO Special Meeting or at any adjournment thereof. It is a prospectus because CECO will issue CECO common stock to PMFG stockholders in connection with the First Merger. On or about August 4, 2015, CECO will begin to deliver printed versions of these materials to its stockholders as of the close of business on the record date for the CECO Special Meeting, July 30, 2015.

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Q. What are the specific proposals on which I am asked to vote at the CECO Special Meeting?

A. CECO stockholders are being asked to approve three proposals at the CECO Special Meeting:

first, CECO stockholders are being asked to approve the Share Issuance, as contemplated by the Merger Agreement, a copy of which is attached to this joint proxy statement/prospectus as Annex A (CECO Proposal No. 1);

second, CECO stockholders are being asked to approve an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, as set forth in the Second Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan, a copy of which is attached to this joint proxy statement/prospectus as CECO Environmental Corp. Annex D (CECO Proposal No. 2); and

finally, CECO stockholders are being asked to approve the adjournment of the CECO Special Meeting, if necessary or appropriate (CECO Proposal No. 3).

Q. How many votes are required to approve each proposal?

A. CECO Proposal Nos. 1, 2 and 3 each require the affirmative vote of the holders of a majority of the shares present, in person or by proxy, and entitled to vote at the CECO Special Meeting.

Q. When and where is the CECO Special Meeting?

A. The CECO Special Meeting will be held at 10:30 a.m. (Eastern Time), on September 2, 2015 at CECO's executive offices, located at 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227. For additional information about the CECO Special Meeting, see *The CECO Special Meeting* beginning on page 62.

Q. What is a quorum?

A. Holders of a majority of the outstanding shares of CECO common stock entitled to vote must be present, in person or by proxy, at the CECO Special Meeting to constitute a quorum and to conduct business at the CECO Special Meeting. Your shares are counted as present if you attend the CECO Special Meeting in person or properly vote over the Internet, by telephone, or by submitting a properly executed proxy card by mail. As of July 30, 2015, the record date for the CECO Special Meeting, 26,442,164 shares of CECO's common stock were outstanding. Abstentions will be counted as present for the purpose of determining a quorum. If you do not provide voting instructions to your broker or other nominee, your shares of CECO common stock will not be voted at the meeting. In the event that a quorum is not present at the CECO Special Meeting, CECO expects that

the CECO Special Meeting will be adjourned to solicit additional proxies.

Q. Who can vote at the CECO Special Meeting?

A. Holders of CECO common stock of record at the close of business on the record date for the CECO Special Meeting, July 30, 2015, will be entitled to notice of and to vote at the CECO Special Meeting.

As of the record date for the CECO Special Meeting, there were 26,442,164 shares of CECO common stock outstanding and entitled to vote at the CECO Special Meeting, held by approximately 422 holders of record.

A complete list of stockholders entitled to vote at the CECO Special Meeting will be available for examination by any stockholder at CECO's corporate headquarters, 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227, during normal business hours for a period of ten days before the CECO Special Meeting and at the time and place of the CECO Special Meeting.

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Q. What is the difference between a stockholder of record and a beneficial holder of shares?

A. If your shares are registered directly in your name with CECO's transfer agent, American Stock Transfer & Trust Company, LLC, you are considered a stockholder of record with respect to those shares. If this is the case, the stockholder proxy materials have been sent or provided directly to you by CECO.

If you hold your CECO common stock in street name through a bank, brokerage firm or other nominee, you should instruct such bank, brokerage firm or other nominee what election to make on your behalf by carefully following the instructions that you will receive from your bank, brokerage firm or other nominee. An election will not be made on your behalf absent your instructions. You may be subject to an earlier deadline for making your election. Please contact your bank, brokerage firm or other nominee with any questions.

Q. How many votes do I have if I am a CECO stockholder?

A. Each share of CECO common stock that you own at the close of business on the record date will entitle you to one vote on each proposal presented at the CECO Special Meeting.

Q. If I am a CECO stockholder, what happens if I abstain from voting?

A. Approval of the proposals relating to the Share Issuance, amendment to the Incentive Plan and possible adjournment of the CECO Special Meeting requires the affirmative vote of the holders of a majority of the shares present, in person or by proxy, and entitled to vote at the CECO Special Meeting (assuming a quorum of stockholders is represented in person or by proxy). Abstentions will have the same effect as a vote AGAINST these proposals. (CECO Proposals Nos. 1, 2 and 3).

Q. Is approval of the amendment of the Incentive Plan required to complete the Mergers?

A. No. However, the CECO Board has made the proposed amendment of the Incentive Plan contingent upon closing of the First Merger. If the First Merger is not completed, then the proposed amendment of the Incentive Plan will not be implemented, even if approved by CECO's stockholders.

Q. Who can attend the CECO Special Meeting?

A. Stockholders eligible to vote at the CECO Special Meeting, or their duly authorized proxies, may attend the CECO Special Meeting. If you choose to attend the CECO Special Meeting, please bring photo identification. If you hold shares in street name (through a broker, bank, or other nominee) and wish to attend the CECO Special Meeting, you can vote at the CECO Special Meeting only if you have a valid proxy from your banker or broker confirming your beneficial ownership of shares of CECO common stock as of the record date and your authority to vote such shares.

Regardless of whether you intend to attend the CECO Special Meeting, you are encouraged to vote your shares of CECO common stock as promptly as possible. Voting your shares will not impact your ability to attend the CECO Special Meeting.

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Q. How do I vote my shares?

- A. If you are a CECO stockholder entitled to vote at the CECO Special Meeting, you may vote over the Internet, by telephone, by mail or in person at the CECO Special Meeting. All votes, other than votes made in person at the CECO Special Meeting, must be received by 11:59 p.m., Eastern Time, on September 1, 2015:

Over the Internet or by Telephone. To vote over the Internet or by telephone, please follow the instructions included on your proxy card. If you vote over the Internet or by telephone, you do not need to complete and mail a proxy card.

Mail. By signing the proxy card and returning it in the enclosed prepaid and addressed envelope, you are authorizing the individuals named on the proxy card to vote your shares at the CECO Special Meeting in the manner you indicate. CECO and PMFG encourage you to sign and return the proxy card even if you plan to attend the CECO Special Meeting so that your shares will be voted if you are ultimately unable to attend the CECO Special Meeting.

In Person. If your shares are registered directly in your name, you have the right to vote in person at the CECO Special Meeting. If you attend the CECO Special Meeting and plan to vote in person, CECO will provide you with a ballot at the CECO Special Meeting.

Q. How do I vote my shares of CECO common stock that are held in street name by a brokerage firm, bank or other nominee?

- A. If your shares are held in a stock brokerage account or by a bank or other nominee, you are considered the beneficial holder of the shares held for you in what is known as street name. If this is the case, the proxy materials have been forwarded to you by your brokerage firm, bank or other nominee, which is considered the stockholder of record with respect to these shares. Please refer to the information forwarded to you by your bank, broker or other holder of record to see what you must do to vote your shares.

Q. Can I change my vote after I have delivered my proxy?

- A. Yes. Stockholders of CECO who execute proxies for the CECO Special Meeting retain the right to revoke them at any time before the shares are voted at the CECO Special Meeting.

To revoke your proxy, you must either:

deliver a signed statement to CECO's Corporate Secretary at or prior to the CECO Special Meeting;

timely execute and deliver, by Internet, telephone, mail or in person at the CECO Special Meeting, another proxy dated as of a later date; or

attend the CECO Special Meeting and vote in person.

Attendance at the CECO Special Meeting, however, will not automatically revoke any proxy that you have given previously unless you request a ballot and vote in person. If you hold shares through a bank or brokerage firm, you must contact the bank or brokerage firm to revoke any prior voting instructions.

Q. What if I receive more than one proxy card?

A. If you receive more than one proxy card, it is an indication that your shares are held in multiple accounts. Please sign and return all proxy cards to ensure that all of your shares are voted.

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Q. What if I do not specify a choice for a matter when returning a proxy?

- A. Stockholders should specify their choice for each matter on the enclosed proxy. If no specific instructions are given, proxies that are signed and returned will be voted:

FOR the proposal to approve of the Share Issuance (CECO Proposal No. 1); and

FOR the proposal to approve an amendment the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000 (CECO Proposal No. 2); and

FOR the proposal to approve of the adjournment of the CECO Special Meeting, if necessary or appropriate (CECO Proposal No. 3).

Q. As a CECO stockholder, am I eligible to receive appraisal rights for the CECO Special Meeting or the Mergers?

- A. No. Appraisal rights are not available to CECO stockholder for the CECO Special Meeting or the Mergers.

Q. Who can help answer my questions?

- A. If you are a CECO stockholder and have any questions about the Mergers, the CECO Special Meeting or how to submit your proxy, or if you need additional copies of this joint proxy statement/prospectus or the enclosed proxy card, you should contact:

Georgeson Inc.

480 Washington Blvd., 26th Floor

Jersey City, NJ 07310

Banks, Brokers and Shareholders

Call Toll-Free (888) 293-6908

Or Contact via E-mail at:

cecoenvironmental@georgeson.com

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QUESTIONS AND ANSWERS ABOUT THE MERGERS AND THE PMFG SPECIAL MEETING

The PMFG Board is soliciting proxies from its stockholders to vote at a special meeting of PMFG stockholders, to be held at 9:00 a.m. (Central Time), on September 2, 2015 at PMFG, Inc., 14651 Dallas Parkway, Suite 500, Dallas, TX 75254 (the PMFG Special Meeting), and any adjournment of the PMFG Special Meeting.

The questions and answers below highlight selected information from this joint proxy statement/prospectus and are intended to briefly address some commonly asked questions about, among other things, (a) the Merger Agreement, the Merger Consideration and the Share Issuance, (b) the First Merger, pursuant to which the separate corporate existence of Merger Sub I will cease and PMFG will survive the First Merger as a wholly owned subsidiary of CECO, (c) the Second Merger, pursuant to which the separate corporate existence of PMFG will cease and Merger Sub II will survive the Second Merger as a wholly owned subsidiary of CECO, and (d) the PMFG Special Meeting, where the stockholders of PMFG will be asked to consider and vote on the adoption of the Merger Agreement and related transactions.

The following questions and answers do not contain all of the information that is important to you. You should carefully read this joint proxy statement/prospectus in its entirety, including the annexes and the documents incorporated by reference, to fully understand the matters to be acted upon and the voting procedures for the PMFG Special Meeting. You may obtain the information incorporated by reference into this joint proxy statement/prospectus without charge by following the instructions under *Where You Can Find More Information* beginning on page 223.

For certain questions and answers about the CECO Special Meeting, see *Questions and Answers about the CECO Special Meeting* beginning on page 8.

Q. Why have I received this joint proxy statement/prospectus?

- A.** You are receiving this joint proxy statement/prospectus because you were a stockholder of PMFG as of the close of business on the record date for the PMFG Special Meeting. On May 3, 2015, the CECO Board and PMFG Board each approved the Merger Agreement, providing for PMFG to be acquired by CECO. A copy of the Merger Agreement is attached to this joint proxy statement/prospectus as Annex A, which CECO and PMFG encourage you to review.

In order to consummate the Mergers, PMFG stockholders must vote to adopt the Merger Agreement. Adoption of the Merger Agreement requires the approval of the holders of a majority of the outstanding shares of PMFG common stock entitled to vote on such matter. The PMFG Board has designated Peter Burlage and Ronald McCrummen (or their respective designees) as proxies who will vote the shares represented by proxies at the PMFG Special Meeting in the manner indicates by the proxies.

This joint proxy statement/prospectus is being delivered to you as both as a proxy statement of PMFG and a prospectus of CECO. It is a proxy statement because the PMFG Board is soliciting proxies from you to vote on the adoption of the Merger Agreement at the PMFG Special Meeting as well as the other matters set forth in the notice of the PMFG Special Meeting and described in this joint proxy statement/prospectus, and your proxy will be used at the PMFG Special Meeting or at any adjournment thereof. It is a prospectus because CECO will issue CECO common stock to PMFG stockholders in connection with the First Merger. On or about August 4, 2015, PMFG will begin to deliver printed versions of these materials to its stockholders as of the close of business on the record date for the PMFG Special Meeting, July 30, 2015.

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Q. What are the specific proposals on which I am asked to vote at the PMFG Special Meeting?

A. PMFG stockholders are being asked to approve three proposals at the PMFG Special Meeting:

first, PMFG stockholders are being asked to approve a proposal to adopt the Merger Agreement, a copy of which is attached as Annex A to this joint proxy statement/prospectus (PMFG Proposal No. 1);

second, PMFG stockholders are being asked to approve the compensation that may become payable to PMFG's named executive officers in connection with the Mergers (PMFG Proposal No. 2). Because the vote is advisory, it will not be binding on PMFG, and failure to receive the vote required for approval will not change PMFG's obligations to pay the merger-related compensation; and

finally, PMFG stockholders are being asked to approve any proposal made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting (PMFG Proposal No. 3).

Q. How many votes are required to approve each proposal?

A. PMFG Proposal No. 1 requires the affirmative vote of the holders of a majority of the shares of PMFG common stock outstanding as of the close of business on the record date for the PMFG Special Meeting. PMFG Proposal Nos. 2 and 3 require the affirmative vote of the holders of a majority of the shares present, in person or by proxy, and entitled to vote at the PMFG Special Meeting.

The vote on Proposal No. 2 is advisory and is not binding on PMFG.

Q. What will I receive if the Mergers are completed?

A. Upon completion of the First Merger, each share of PMFG common stock issued and outstanding immediately prior to the completion of the First Merger will be converted into the right to receive, at your election, subject to proration:

the Cash Consideration of \$6.85, without interest; **or**

the Stock Consideration, which will consist of a number of shares of CECO common stock equal to the Exchange Ratio, plus cash (without interest) in lieu of any fractional share of CECO common stock that would otherwise be issued.

The Merger Agreement provides that \$66.2 million (or approximately 45%) of the aggregate consideration that will be paid by CECO will be paid in cash. In addition, PMFG Options and PMFG RSUs will be settled for approximately

\$1.6 million in cash from the \$66.2 million of the aggregate consideration paid in cash. The remaining approximately 55% of the aggregate consideration will be paid in shares of CECO common stock. As such, if PMFG stockholders make a cash election or a stock election, the form of Merger Consideration they actually receive may be adjusted according to the proration procedures contained in the Merger Agreement.

PMFG stockholders who fail to make a valid election for any reason by the Election Deadline, which is 5:00 p.m. Eastern Time, on September 1, 2015 will be deemed to have made a non-election and will have no control over the form of Merger Consideration they will receive in exchange for their shares of PMFG common stock. The form of Merger Consideration that these non-electing stockholders receive will depend on which form of Merger Consideration is oversubscribed or undersubscribed.

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Q. What is the deadline for making an election?

- A. To be properly made, your election must be received by American Stock Transfer & Trust Company, LLC (the Exchange Agent), at its designated office, by the Election Deadline, which is 5:00 p.m. Eastern Time on September 1, 2015. In the event that the expected Election Deadline changes, CECO and PMFG will announce the revised date in a press release, on their respective websites and in filings with the SEC. You may also obtain up-to-date information regarding the Election Deadline by calling Georgeson Inc. at (888) 505-9118.

Q. How do I make an election for the form of Merger Consideration that I prefer?

- A. PMFG stockholders should carefully review and follow the instructions in the form of election and other appropriate and customary transmitted materials, which are being mailed concurrently with this joint proxy statement/prospectus. Each PMFG stockholder may specify in the form of election the number of shares of PMFG common stock that the stockholder elects to be converted in the First Merger into the right to receive (a) the Cash Consideration of \$6.85 per share, without interest, and/or (b) the Stock Consideration. In this joint proxy statement/prospectus, we refer to an election to receive the Cash Consideration as a cash election and an election to receive the Stock Consideration as a stock election. A PMFG stockholder who submits a form of election is not required to elect the same form of Merger Consideration for all of his, her or its shares. The form of election allows a stockholder to make a cash election for some of his, her or its shares of PMFG common stock and a stock election for the remaining shares.

PMFG stockholders who fail to make a valid election for any reason by the Election Deadline, which is 5:00 p.m., Eastern Time, on September 1, 2015, will be deemed to have made a non-election and will have no control over the form of Merger Consideration that they receive. Instead, the form of Merger Consideration they receive will depend on which form of Merger Consideration is oversubscribed or undersubscribed.

Q. How do I make an election if my shares of PMFG common stock are held in street name by my bank, brokerage firm or other nominee?

- A. If you hold your PMFG common stock in street name through a bank, brokerage firm or other nominee, you should instruct such bank, brokerage firm or other nominee what election to make on your behalf by carefully following the instructions that you will receive from your bank, brokerage firm or other nominee. An election will not be made on your behalf absent your instructions. You may be subject to an earlier deadline for making your election. Please contact your bank, brokerage firm or other nominee with any questions.

Q. Can I change my election after the form of election has been submitted?

- A. Yes. You may revoke or change your election at or prior to the Election Deadline by submitting a written notice of revocation or change to the Exchange Agent or by submitting new election materials. Revocations must specify the name in which your shares are registered on the share transfer books of PMFG and any other information that the Exchange Agent may request. If you wish to submit a new election, you must do so in

accordance with the election procedures described in this joint proxy statement/prospectus and the form of election. If you instructed a bank, brokerage firm or other nominee holder to submit an election for your shares, you must follow your bank's, brokerage firm's or other nominee's directions for changing those instructions. The notice of revocation must be received by the Exchange Agent at or prior to the Election Deadline in order for the revocation or new election to be valid. All cash and stock elections will automatically be revoked and CECO will instruct the Exchange Agent to return all shares of PMFG common stock submitted or transferred to the Exchange Agent, if the Merger Agreement is terminated.

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Q. Am I guaranteed to receive what I ask for on the form of election?

- A. No. Your election is subject to proration, adjustment and certain limitations as set forth in the Merger Agreement and described in this joint proxy statement/prospectus. If you make a stock election and the Stock Consideration is oversubscribed, then some of your shares of PMFG common stock will be converted into the right to receive the Cash Consideration instead. Similarly, if you make a cash election and the Cash Consideration is oversubscribed, then some of your shares of PMFG common stock will be converted in the First Merger into the right to receive the Stock Consideration instead. Accordingly, you may not receive exactly the form of Merger Consolidation you elect to receive. You instead may receive a mix of the Cash Consideration and the Stock Consideration calculated based on (a) the number of shares of PMFG common stock making each type of election and (b) the requirements under the Merger Agreement that (1) \$66.2 million (or approximately 45%) of the aggregate consideration that will be paid by CECO will be paid in cash, (2) PMFG Options and PMFG RSUs will be settled for approximately \$1.6 million in cash from the \$66.2 million of the aggregate consideration paid in cash and (3) the remaining approximately 55% of the aggregate consideration will be paid in shares of CECO common stock.

Q. What happens if I do not send a form of election or it is not received by the Election Deadline?

- A. If the Exchange Agent does not receive a properly completed form of election from you at or prior to the Election Deadline (together with any stock certificates or evidence of shares in book-entry form representing the shares of PMFG common stock covered by your election or a guarantee of delivery as described in the form of election), then you will be deemed to have made a non-election with respect to your shares of PMFG common stock. As such, the form of Merger Consideration you receive will depend on which form of Merger Consideration is oversubscribed or undersubscribed. **PMFG stockholders bear the risk of delivery of all the materials that they are required to submit to the Exchange Agent in order to properly make an election.**

Q. How do I calculate the value of the Stock Consideration?

- A. Subject to the collar described below, the Stock Consideration payable in respect of each share of PMFG common stock will consist of a number of shares of CECO common stock equal to the Exchange Ratio, plus cash (without interest) in lieu of any fractional share of CECO common stock that would otherwise be issued. For a more detailed discussion of the value of the Stock Consideration, please see *The Mergers Merger Consideration* beginning on page 132.

Q. May I transfer shares of PMFG common stock after making an election?

- A. Yes. However, after making an election, any transfer of your shares of PMFG common stock will automatically revoke that election. If the shares are transferred after the Election Deadline at 5:00 p.m. Eastern Time, on September 1, 2015 no new election may be made. PMFG stockholders who fail to make a valid election for any reason will be deemed to have made a non-election and will have no control over the form of Merger Consideration they will receive in exchange for their shares of PMFG common stock. The form of Merger

Consideration that these non-electing stockholders receive will depend on which form of Merger Consideration is oversubscribed or undersubscribed.

Q. May PMFG stockholders submit a form of election even if they do not vote to adopt the Merger Agreement and approve the transactions contemplated thereby, including the First Merger?

A. Yes. PMFG stockholders may submit a form of election even if they fail to vote, abstain, or vote against adoption of the Merger Agreement.

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Q. When can I expect to receive the Merger Consideration?

- A. After the closing of the First Merger, provided the Exchange Agent has received your properly completed form of election (together with any stock certificates or evidence of shares in book-entry form representing the shares of PMFG common stock covered by your election or a guarantee of delivery as described in the form of election), you will receive from the Exchange Agent the Cash Consideration and/or Stock Consideration to which you are entitled within ten business days after such closing.

For stockholders who did not properly complete a form of election, PMFG will mail a letter of transmittal and instructions for surrendering certificated or book-entry shares. The mailing will commence no more than five business days after the Effective Time. Following the delivery of the letter of transmittal and all of the outstanding shares of the stockholder, the stockholder will receive, within ten business days, the Merger Consideration available (consisting of Cash Consideration, Stock Consideration or a combination of Cash Consideration and Stock Consideration) after CECO gives effect to all of the properly completed elections of other stockholders.

Q. What happens if I am eligible to receive a fraction of a share of CECO common stock as part of the Stock Consideration?

- A. If you receive the Stock Consideration, whether by election or due to proration, you will only receive whole shares of CECO common stock. If the aggregate number of shares of CECO common stock that you are entitled to receive as part of the Stock Consideration includes a fraction of a share of CECO common stock, you will receive cash in lieu of that fractional share. See *The Merger Agreement Consideration to Be Received in the Mergers* beginning on page 155.

Q. Where will the CECO common stock that I may elect to receive in the Mergers be traded?

- A. The new shares of CECO common stock issued in the First Merger will be listed and tradable on NASDAQ. CECO common stock is traded on NASDAQ under the symbol CECE.

See *The Mergers PMFG Board's Reasons for the Mergers and Recommendation of the PMFG Board* beginning on page 110.

Q. When are the Mergers expected to be consummated?

- A. CECO and PMFG are working toward consummating the Mergers as expeditiously as possible and currently expect the Mergers to be consummated in the third quarter of 2015. However, CECO and PMFG cannot be certain when, or if, the conditions to the Mergers will be satisfied or waived, or that the Mergers will be consummated.

As more fully described in this joint proxy statement/prospectus and in the Merger Agreement, the completion of the Mergers depends on a number of conditions being satisfied or, where legally permissible, waived. These conditions include, among others, the adoption of the Merger Agreement by the holders of a majority of the outstanding shares of

PMFG common stock entitled to vote on such matter, the expiration or termination of the applicable waiting period under the HSR Act (which occurred on June 12, 2015), the effectiveness of the registration statement (of which this joint proxy statement/prospectus is a part) relating to the Share Issuance, and the absence of any law or regulation that prohibits the completion of the Mergers.

Each party's obligation to consummate the Mergers is also subject to the material accuracy of the representations and warranties of the other party in the Merger Agreement, compliance in all material respects with covenants of the other party in the Merger Agreement, and the absence of a material adverse effect (as defined in the Merger Agreement) on the other party. Further, while the Merger Agreement does not include a financing condition, PMFG cannot seek specific performance to consummate the Mergers unless and until the debt financing contemplated in the Commitment Letter provided at signing by CECO, or an alternative financing, is available.

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Q. Are there risks associated with the Mergers that I should consider in deciding how to vote?

A. Yes. There are a number of risks related to the Mergers and the other transactions contemplated by the Merger Agreement that are discussed in this joint proxy statement/prospectus and in the documents incorporated by reference or referred to in this joint proxy statement/prospectus. Please read with particular care the detailed description of the risks described in *Risk Factors* beginning on page 39 and in CECO's and PMFG's respective filings with the SEC referred to in *Where You Can Find More Information* beginning on page 223.

Q. When and where is the PMFG Special Meeting?

A. The PMFG Special Meeting will be held at 9:00 a.m. (Central Time), on September 2, 2015 at PMFG, Inc., 14651 Dallas Parkway, Suite 500, Dallas, TX 75254. For additional information about the PMFG Special Meeting, see *The PMFG Special Meeting* beginning on page 75.

Q. What is a quorum?

A. Holders of a majority of the outstanding shares of PMFG common stock entitled to vote must be present, in person or by proxy, at the PMFG Special Meeting to constitute a quorum and to conduct business at the PMFG Special Meeting. Your shares are counted as present if you attend the PMFG Special Meeting in person or properly vote over the Internet, by telephone or by submitting a properly executed proxy card by mail. As of July 30, 2015, the record date for the PMFG Special Meeting, 21,202,725 shares of PMFG's common stock were outstanding and entitled to vote. Abstentions will be counted as present for the purpose of determining a quorum. In the event that a quorum is not present at the PMFG Special Meeting, PMFG expects that the PMFG Special Meeting will be adjourned to solicit additional proxies.

Q. Who can vote at the PMFG Special Meeting?

A. Holders of PMFG common stock of record at the close of business on the record date for the PMFG Special Meeting, July 30, 2015, will be entitled to notice of and to vote at the PMFG Special Meeting. As of the record date for the PMFG Special Meeting, there were 21,202,725 shares of PMFG common stock outstanding and entitled to vote at the PMFG Special Meeting, held by approximately 84 holders of record.

Q. How many votes do I have if I am a PMFG stockholder?

A. Each share of PMFG common stock that you own at the close of business on the record date will entitle you to one vote on each proposal presented at the PMFG Special Meeting.

Q. If I am a PMFG stockholder, what happens if I abstain from voting?

A. The adoption of the Merger Agreement by PMFG stockholders requires the affirmative vote of the holders of a majority of the shares of PMFG common stock outstanding as of the close of business on the record date for the PMFG Special Meeting. Abstentions will have the same effect as a vote **AGAINST** the proposal to adopt the Merger Agreement (PMFG Proposal No. 1).

Approval of the proposals relating to the advisory vote on certain compensation arrangements and possible adjournment of the PMFG Special Meeting requires the affirmative vote of the holders of a majority of the shares present, in person or by proxy, and entitled to vote at the PMFG Special Meeting (assuming a quorum of stockholders is represented in person or by proxy). Abstentions will have the same effect as a vote **AGAINST** these proposals (PMFG Proposals Nos. 2 and 3).

Q. If I am a PMFG stockholder and my shares of PMFG common stock are held in street name by a broker, bank or other nominee, will my broker or bank vote my share for me?

A. All of the proposals at the PMFG Special Meeting are considered non-routine matters. As a result, your broker may not vote your shares without your specific instructions.

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Q. Why am I being asked to consider and vote upon a proposal to approve the compensation that may be payable by PMFG to its named executive officers in connection with the Mergers?

A. Under SEC rules, PMFG is required to seek a non-binding, advisory vote with respect to the compensation that will or may be paid by PMFG to its named executive officers in connection with the Mergers, otherwise referred to as golden parachute compensation.

Q. What will happen if PMFG stockholders do not approve the golden parachute compensation?

A. Approval of the compensation that may be payable by PMFG to its named executive officers in connection with the Mergers is not a condition to the Mergers. This vote is an advisory vote and will not be binding on PMFG or the surviving entity in the Mergers. Therefore, if the Merger Agreement is adopted by PMFG stockholders and the Mergers are consummated, this compensation, including amounts that PMFG is contractually obligated to pay, could still be payable regardless of the outcome of the advisory vote.

Q. Are CECO stockholders voting on the Mergers?

A. While CECO stockholders are not required to approve or adopt the Merger Agreement, CECO stockholders are required to approve the issuance of CECO common shares, or the Share Issuance, as part of the consideration for the Mergers. If CECO stockholders do not approve the Share Issuance, the Mergers cannot be completed. Under the NASDAQ Listing Rules, stockholder approval is required prior to the issuance of common stock if the number of shares of common stock to be issued in a transaction equals 20% or more of the number of shares of common stock outstanding before the issuance. Depending on the actual Exchange Ratio that will be in effect as of the closing of the First Merger, the Share Issuance that will be effected in connection with the First Merger will result in the issuance of a number of shares of CECO common stock equal to between approximately 23.6% and 28.9% of the shares of CECO common stock outstanding as of June 1, 2015. Accordingly, CECO stockholders are being asked to consider and vote on the Share Issuance only.

Q. If I beneficially owned restricted shares of PMFG common stock as of the record date for the PMFG Special Meeting that were issued pursuant to any of PMFG's equity incentive plans, will I be able to vote on the matters to be voted upon at the PMFG Special Meeting?

A. Yes. Holders who beneficially owned restricted shares of PMFG common stock as of the record date for the PMFG Special Meeting issued pursuant to any of PMFG's equity incentive plans may vote on the adoption of the Merger Agreement and on the other matters to be voted on at the PMFG Special Meeting.

Q. Will any other matters be presented for a vote at the PMFG Special Meeting?

A. PMFG is not aware of any other matters that will be presented for a vote at the PMFG Special Meeting. However, if any other matters properly come before the PMFG Special Meeting, the proxies will have the discretion to vote upon such matters in their discretion.

Q. How do I vote my shares of PMFG common stock that are held in street name by a brokerage firm, bank or other nominee?

A. If your shares are held in an account at a brokerage firm, bank, or other nominee, then you are the beneficial owner of shares held in street name and this joint proxy statement/prospectus is being sent to you by that organization. The organization holding your account is considered to be the stockholder eligible to vote at the PMFG Special Meeting for purposes of voting at the PMFG Special Meeting. As a beneficial owner, you have the right to direct your broker, bank, or other nominee how to vote the shares in your account by following the instructions that the broker, bank, or other nominee provides you along with this joint proxy statement/prospectus.

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Q. Who can attend the PMFG Special Meeting?

- A. Stockholders eligible to vote at the PMFG Special Meeting, or their duly authorized proxies, may attend the PMFG Special Meeting. If you choose to attend the PMFG Special Meeting, please bring photo identification. If you hold shares in street name (through a broker, bank, or other nominee) and wish to attend the PMFG Special Meeting, you will also need to bring a copy of a brokerage statement (in a name matching your photo identification) reflecting your stock ownership as of the record date for the PMFG Special Meeting. If you are a representative of a corporate or institutional stockholder, you must present valid photo identification along with proof that you are a representative of such stockholder.

Please note that use of cameras, recording devices and other electronic devices will not be permitted at the PMFG Special Meeting.

Regardless of whether you intend to attend the PMFG Special Meeting, you are encouraged to vote your shares of PMFG common stock as promptly as possible. Voting your shares will not impact your ability to attend the PMFG Special Meeting.

Q. How do I vote my shares?

- A. If you are a PMFG stockholder entitled to vote at the PMFG Special Meeting, you may vote over the Internet, by telephone, by mail or in person at the PMFG Special Meeting. All votes, other than votes made in person at the PMFG Special Meeting, must be received by 11:59 p.m., Eastern Time, on September 1, 2015.

Over the Internet or by Telephone. To vote over the Internet or by telephone, please follow the instructions included on your proxy card. If you vote over the Internet or by telephone, you do not need to complete and mail a proxy card.

Mail. By signing the proxy card and returning it in the enclosed prepaid and addressed envelope, you are authorizing the individuals named on the proxy card to vote your shares at the PMFG Special Meeting in the manner you indicate. CECO and PMFG encourage you to sign and return the proxy card even if you plan to attend the PMFG Special Meeting so that your shares will be voted if you are ultimately unable to attend the PMFG Special Meeting.

In Person. If your shares are registered directly in your name, you have the right to vote in person at the PMFG Special Meeting. If you attend the PMFG Special Meeting and plan to vote in person, PMFG will provide you with a ballot at the PMFG Special Meeting.

Q. Can I change my vote after I have delivered my proxy?

- A. Yes. You can change your vote at any time before your proxy is voted at the PMFG Special Meeting.

If you are a stockholder entitled to vote at the PMFG Special Meeting, you may revoke your proxy at any time before the vote is taken at the PMFG Special Meeting. To revoke your proxy, you must either:

enter a new vote over the Internet or by telephone by 11:59 p.m., Eastern Time, on September 1, 2015;

sign and return another proxy card, which must be received by 11:59 p.m., Eastern Time, on September 1, 2015;

provide written notice of the revocation to: PMFG, Inc., Attention: Secretary, 14651 North Dallas Parkway, Suite 500, Dallas, Texas 75254, which must be received by 11:59 p.m., Eastern Time, on September 1, 2015;
or

attend the PMFG Special Meeting and vote your shares in person.

If you are the beneficial owner of shares held in street name by a brokerage firm, bank, or other nominee, you should follow the instructions of your broker, bank, or other nominee regarding the revocation of proxies. Please contact your broker, bank or other nominee and follow its directions in order to change your vote.

If the PMFG Special Meeting is adjourned, it will not affect the ability of stockholders eligible to vote at the PMFG Special Meeting to exercise their voting rights or to revoke any previously granted proxy using the methods described above.

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Q. What if I receive more than one proxy card?

- A. If you receive more than one proxy card, it is an indication that your shares are held in multiple accounts. Please sign and return all proxy cards to ensure that all of your shares are voted.

Q. What do I need to do now to vote my shares?

- A. After carefully reading and considering the information contained in this joint proxy statement/prospectus, please respond by completing, signing, and dating the appropriate proxy card or voting instruction card and returning in the enclosed postage-paid envelope, or, if available, by submitting your voting instruction over the Internet or by telephone, as soon as possible so that your shares of PMFG common stock may be represented and voted at the PMFG Special Meeting. In addition, you may also vote your shares in person at the PMFG Special Meeting. If you hold shares registered in the name of a broker, bank, or other nominee, that broker, bank, or other nominee has enclosed, or will provide, instructions for directing your broker, bank, or other nominee how to vote those shares.

Q. Should I send in my stock certificates (or evidence of shares in book-entry form) with my proxy card?

- A. No. Please do NOT send your PMFG stock certificates (or evidence of shares in book-entry form) with your proxy card. As described under *The Mergers Electing the Form of Merger Consideration* beginning on page 134, each PMFG stockholder as of the close of business on the record date for the PMFG Special Meeting will receive a form of election and other appropriate and customary transmittal materials, which are being mailed concurrently with this joint proxy statement/prospectus, describing how you may exchange your shares of PMFG common stock for the Merger Consideration. If your shares of PMFG common stock are held in street name through a brokerage firm, bank or other nominee, you will receive instructions from your brokerage firm, bank or other nominee as to how to effect the surrender of your street name shares of PMFG common stock in exchange for the per share Merger Consideration.

Q. Who can help answer my questions?

- A. If you are a PMFG stockholder and have any questions about the Mergers, the PMFG Special Meeting or how to submit your proxy, or if you need additional copies of this joint proxy statement/prospectus or the enclosed proxy card, you should contact:

Georgeson Inc.

480 Washington Blvd., 26th Floor

Jersey City, NJ 07310

Banks, Brokers and Shareholders

Edgar Filing: CECO ENVIRONMENTAL CORP - Form 424B3

Call Toll-Free (888) 505-9118

Or Contact via E-mail at:

pmfginc@georgeson.com

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SUMMARY

This summary highlights selected information from this joint proxy statement/prospectus and may not contain all the information that is important to you. To understand the Mergers fully and for a more complete description of the legal terms of the Mergers, you should carefully read this entire joint proxy statement/prospectus and the other documents to which you are referred. Please also refer to *Where You Can Find More Information* beginning on page 223. Page references are included to direct you to a more complete description of the topics presented in this summary.

The Companies (page 50)

CECO, Merger Sub I and Merger Sub II

CECO is a leading global environmental technology company focused on critical solutions in the product recovery, air pollution control, fluid handling and filtration industries. CECO was incorporated in the State of New York in 1966 and reincorporated in the State of Delaware in January 2002. CECO has been publicly traded since January 1, 1978 and its common stock currently trades on NASDAQ under the symbol CECE.

CECO operates through three principal groups, each of which is a reportable segment: (1) Air Pollution Control, (2) Energy and (3) Fluid Handling and Filtration. By combining the efforts of certain or all of these segments, CECO is able to offer complete full systems to our customers and leverage the operational efficiencies between its family of technology companies.

During 2014, CECO operated its business under the following three reportable segments:

Air Pollution Control Segment, product recovery and air pollution control technologies, comprised of the following: Adwest Technologies, Inc., HEE-Duall Air and Odor Technologies, Busch International, Emtrol-Buell Energy Cyclones, Flex-Kleen Dust Collection Technologies, Fisher-Klosterman, Kirk & Blum, KB Duct and SAT Technology.

Energy Segment, customized solutions for the power and petrochemical industry, comprised of the following: Aarding Thermal Acoustics, Effox-Flexor, AVC Specialists and Zhongli.

Fluid Handling and Filtration Segment, high quality pump, filtration and fume exhaust solutions, comprised of the following: Met-Pro Global Pump Solutions, Mefiag Filtration Solutions, Keystone Filtration Solutions, CECO Filters and Strobic Air.

CECO's principal executive offices are located at 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227 and the telephone number at that location is (513) 458-2600.

Top Gear Acquisition Inc. is a Delaware corporation and Top Gear Acquisition II LLC is a Delaware limited liability company. Each is a wholly owned subsidiary of CECO. Both of these companies were incorporated on April 30, 2015, solely for the purpose of effecting the Mergers, pursuant to the Merger Agreement.

Additional information about CECO and its subsidiaries is included in documents incorporated by reference into this joint proxy statement/prospectus. Please refer to *Where You Can Find More Information* beginning on page 223.

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PMFG

PMFG, Inc. was incorporated in Delaware on August 15, 2008, as part of a holding company reorganization. Through its operating subsidiary, Peerless Mfg. Co., PMFG has been in business for over 80 years. PMFG is a leading provider of custom-engineered systems and products designed to help ensure that the delivery of energy is safe, efficient and clean.

PMFG primarily serves the markets for natural gas infrastructure, power generation and refining and petrochemical processing. With the acquisition in March 2014 of substantially all of the assets of Combustion Components Associates, Inc., PMFG expanded the markets it serves to include industrial and utility industries. PMFG offers a broad range of separation and filtration products, Selective Catalytic Reduction systems, Selective Non-Catalytic Reduction systems, low emissions burner and related combustion systems and other complementary products including pulsation dampeners and silencers. Its primary customers include original equipment manufacturers, engineering contractors, commercial and industrial companies and operators of power facilities.

PMFG works closely with customers to design, custom-engineer and fabricate its systems and products to meet its customers' specific needs. Its products and systems are marketed worldwide. In the fiscal year ended June 28, 2014, PMFG generated over \$130 million in revenue and ended the fiscal year with approximately 500 employees.

PMFG common stock, \$0.01 par value per share, is traded on NASDAQ under the symbol PMFG.

PMFG's principal executive offices are located at 14651 North Dallas Parkway, Suite 500, Dallas, Texas 75254 and the telephone number at that location is (214) 357-6181.

Additional information about PMFG and its subsidiaries is included in the PMFG documents incorporated by reference into this joint proxy statement/prospectus. Please refer to *Where You Can Find More Information* beginning on page 223.

The CECO Special Meeting (page 62)

The special meeting of CECO stockholders will be held on September 2, 2015 at 10:30 a.m., Eastern Time, at its executive offices, 4625 Red Bank Road, Suite 200, Cincinnati, OH 45227. The special meeting of CECO stockholders is being held for the following purposes:

to approve the Share Issuance;

to approve an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, as set forth in the Second Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan, a copy of which is attached to this joint proxy statement/prospectus as Annex D; and

to approve the adjournment of the CECO Special Meeting, if necessary or appropriate.

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Shares Owned by CECO Directors and Executive Officers (page 63)

At the close of business on the record date for the CECO Special Meeting, directors and executive officers of CECO beneficially owned and were entitled to vote, in the aggregate, approximately 4,942,792 issued and outstanding shares of CECO common stock, representing approximately 18.7% of the shares of CECO common stock outstanding on that date. The directors and executive officers of CECO have informed CECO that they intend to vote all of the shares of CECO common stock they are entitled to vote (a) **FOR** the proposal to approve the Share Issuance, (b) **FOR** the proposal to approve an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, and (c) **FOR** the proposal to approve the adjournment of the CECO Special Meeting, if necessary or appropriate.

The PMFG Special Meeting (page 75)

The PMFG Special Meeting will be held at 9:00 a.m., Central Time on September 2, 2015, at PMFG, Inc., 14651 Dallas Parkway, Suite 500, Dallas, TX 75254. The special meeting of PMFG stockholders is being held for the following purposes:

to adopt the Merger Agreement;

to approve the compensation that may become payable to PMFG's named executive officers in connection with the Mergers; and

to approve specified proposals made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting.

Shares Owned by PMFG Directors and Executive Officers (page 76)

At the close of business on the record date for the PMFG Special Meeting, directors and executive officers of PMFG beneficially owned and were entitled to vote, in the aggregate, approximately 566,195 issued and outstanding shares of PMFG common stock, representing approximately 2.7% of the shares of PMFG common stock outstanding on that date. The directors and executive officers of PMFG have informed PMFG that they intend to vote all of the shares of PMFG common stock they are entitled to vote (a) **FOR** the proposal to adopt the Merger Agreement, (b) **FOR** the proposal to approve the compensation that may become payable by PMFG to its named executive officers in connection with the Mergers, and (c) **FOR** the proposal to approve any proposal made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting. For a more detailed discussion of the beneficial ownership of directors and officers of PMFG, see *Beneficial Ownership of PMFG Common Stock* beginning on page 219.

The Mergers (page 83)

What PMFG Stockholders Will Receive in the Mergers (page 132)

At the Effective Time, each issued and outstanding share of PMFG common stock (other than Dissenting Shares and shares owned by PMFG or its wholly owned subsidiaries or by CECO, Merger Sub I or Merger Sub II) will be converted into the right to receive, at the holder's election, subject to proration, either:

the Cash Consideration of \$6.85, without interest; or

the Stock Consideration, which will consist of a number of shares of CECO common stock equal to the Exchange Ratio, plus cash (without interest) in lieu of any fractional share of CECO common stock that would otherwise be issued.

In this joint proxy statement/prospectus, when the term **Merger Consideration** is used with respect to a given share of PMFG common stock, it means either the Cash Consideration (with respect to a share of PMFG common stock representing the right to receive the Cash Consideration) or the Stock Consideration (with respect to a share of PMFG common stock representing the right to receive the Stock Consideration).

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The Merger Agreement provides that \$66.2 million (or approximately 45%) of the aggregate consideration that will be paid by CECO will be paid in cash. In addition, PMFG Options and PMFG RSUs will be settled for approximately \$1.6 million in cash from the \$66.2 million of the aggregate consideration paid in cash. The remaining approximately 55% of the aggregate consideration will be paid in shares of CECO common stock. As such, if PMFG stockholders make a cash election or a stock election, the form of Merger Consideration they actually receive may be adjusted according to the proration procedures contained in the Merger Agreement.

The actual Exchange Ratio will be determined by dividing (a) \$6.85 by (b) the CECO Average Trading Price. Further, under the terms of the Merger Agreement, the Exchange Ratio is subject to a collar, meaning that in no event will the Exchange Ratio be less than 0.5282 or greater than 0.6456. Specifically, if the CECO Average Trading Price is:

greater than or equal to \$12.97, the Exchange Ratio will be equal to 0.5282 share of CECO common stock for each share of PMFG common stock; and

less than or equal to \$10.61, the Exchange Ratio will be equal to 0.6456 share of CECO common stock for each share of PMFG common stock.

The actual Exchange Ratio and the value of the Stock Consideration are both subject to fluctuation and will not be known until immediately preceding the closing of the First Merger. As an example, the CECO Average Trading Price on NASDAQ for the 15 consecutive trading days ending on the last trading day before July 29, 2015 was \$9.78. Assuming that the closing of the First Merger occurred on July 29, 2015, a share of PMFG common stock converted in the First Merger into the right to receive the Stock Consideration would receive 0.6456 shares of CECO common stock based on an Exchange Ratio of 0.6456. Because the Exchange Ratio was limited by the collar, the value of the Stock Consideration would have been \$6.31. For additional examples of the differing Exchange Ratios and value of the Stock Consideration, please see page 133.

The example above is illustrative only. The actual CECO Average Trading Price will not be determined until immediately preceding the closing of the First Merger and may be different than (a) at the time period used in the example above, (b) at the time of the mailing of this joint proxy statement/prospectus or (c) at the time PMFG stockholders make an election. Further, because the Stock Consideration is subject to a collar and is determined over a set period of time and not as of the Effective Time, the value of the Stock Consideration at the Effective Time may be greater than or less than (x) the Cash Consideration and (y) the trading price of CECO common stock on NASDAQ at the Effective Time.

PMFG does not have any right to terminate the transaction even if the value of the Stock Consideration is less than \$6.85 per share. This means that PMFG stockholders who elect to receive Stock Consideration, or who will receive the Stock Consideration as a result of the proration procedures in the Merger Agreement, could receive more or less value for their shares of PMFG common stock than they would have received if they had elected to receive (or received pursuant to proration) the Cash Consideration. In the event this were to occur, PMFG would not resolicit approval of the adoption of the Merger Agreement, nor reopen the Merger Consideration election period.

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Neither CECO nor PMFG is making any recommendation as to whether PMFG stockholders should elect to receive the Cash Consideration or the Stock Consideration in the First Merger. PMFG stockholders must make their own decision with respect to this election. No guarantee can be made that PMFG stockholders will receive the amount of the Cash Consideration or the Stock Consideration they elect. As a result of the proration procedures in the Merger Agreement, which are described in this joint proxy statement/prospectus, PMFG stockholders may receive the Stock Consideration or the Cash Consideration in amounts that are different from the amounts they elect to receive. Because the value of the Stock Consideration and the Cash Consideration may differ, PMFG stockholders may receive consideration having an aggregate value less than the value of the form of consideration that they elected to receive. PMFG stockholders should obtain current and historical market quotations for CECO common stock before deciding what elections to make.

The actual value to be received by PMFG stockholders will be based on the relative values of the Stock Consideration and the Cash Consideration calculated as of the last trading day before the closing of the First Merger. Because PMFG stockholders making elections will likely take into account the relative values of the Stock Consideration and the Cash Consideration in determining what form of election to make, they will likely elect to receive the form of consideration resulting in the higher value. As a result, if you fail to make an election, you are more likely to receive the form of consideration having the lower value (based on the relative values of the Stock Consideration and the Cash Consideration as of the last trading day before the First Merger).

Ownership of CECO Following the Mergers (page 140)

Based on the number of shares of PMFG common stock outstanding as of the close of business on the record date for the PMFG Special Meeting and the number of shares of CECO common stock outstanding as of the close of business on the record date for the CECO Special Meeting, it is anticipated that, immediately following the First Merger, PMFG stockholders who receive the Stock Consideration in the First Merger will own in the aggregate (excluding any CECO shares they may own or acquire prior to consummation of the First Merger) between approximately 19.0% and 22.3% of the outstanding shares of CECO common stock.

After completion of the First Merger, each CECO stockholder will have the same number of shares of CECO common stock that such stockholder held immediately prior to the completion of the First Merger. However, upon Share Issuance, each share of CECO common stock outstanding immediately prior to the completion of the First Merger will represent a smaller percentage of the aggregate number of shares of CECO common stock outstanding after the completion of the First Merger. On the other hand, each share of CECO common stock will then represent an equity interest in a company with more assets.

What Will Happen in the Mergers (page 154)

At the Effective Time, each issued and outstanding share of common stock of PMFG (other than Dissenting Shares, shares owned by PMFG or its wholly owned subsidiaries, CECO, Merger Sub I or Merger Sub II) will be converted into the Merger Consideration (as described above), and each issued and outstanding share of common stock of Merger Sub I will be converted into one share of common stock of PMFG (as the surviving corporation of the First Merger). At the effective time of the Second Merger, each issued and outstanding share of common stock of PMFG (as the surviving corporation of the First Merger) will be cancelled and extinguished for no consideration, after which CECO will own all of the issued and outstanding equity interests of the surviving entity of the Second Merger.

Neither the PMFG stockholders nor the CECO stockholders will have an opportunity to vote on the Second Merger. The only condition to completion of the Second Merger is the closing of the First Merger.

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Regulatory Filings and Approvals Required to Complete the Mergers (page 150)

The transactions contemplated by the Merger Agreement require CECO and PMFG to obtain regulatory approval under the HSR Act, and the rules promulgated thereunder by the FTC. CECO and PMFG have agreed to cooperate and use reasonable best efforts to obtain such regulatory approval. For an acquisition transaction meeting certain size thresholds, such as the Mergers, the HSR Act requires the parties to file notification and report forms with the Antitrust Division of the DOJ and the FTC and to observe specified required waiting periods before consummating the transaction, subject to any request for and grant of early termination. CECO and PMFG filed the required notifications with the Antitrust Division of the DOJ and the FTC on May 18, 2015. The FTC granted early termination of the waiting period under the HSR Act on June 12, 2015.

Aside from HSR Act approval, neither CECO nor PMFG is aware of any material governmental or regulatory approval required for the completion of the Mergers other than compliance with the applicable corporate law of the State of Delaware.

Legal Proceedings Related to the Mergers (page 150)

Since the public announcement of the proposed Mergers on May 4, 2015, CECO, Merger Sub I, Merger Sub II, PMFG and the members of the PMFG Board have been named as defendants in three lawsuits that challenge the Mergers. The first filed lawsuit, which is a derivative action that also purports to assert class claims, was filed in the District Court of Dallas County, Texas (the Texas Lawsuit). The second and third filed lawsuits, which are class actions, were filed in the Court of Chancery of the State of Delaware (the Delaware Lawsuits, and collectively with the Texas Lawsuit, the Lawsuits). In the Lawsuits, the plaintiffs generally allege, among other things, that the Mergers fail to properly value PMFG, that the individual defendants breached their fiduciary duties in approving the Merger Agreement, and that those breaches were aided and abetted by CECO, Merger Sub I and Merger Sub II. In the Lawsuits, the plaintiffs seek, among other things, (a) to enjoin the defendants from completing the Mergers on the agreed-upon terms, (b) rescission, to the extent already implemented, of the Merger Agreement or any of the terms therein, and (c) costs and disbursements and attorneys' and experts' fees, as well as other equitable relief as the courts deem proper.

Composition of the CECO Board and Management after Closing of the Mergers (page 151)

CECO expects the composition of the CECO Board following the Mergers will continue to be the current directors of CECO.

As of the date of this joint proxy statement/prospectus, CECO has not made any proposals to the current executive officers of PMFG with respect to their employment by CECO following the closing of the Mergers. See *The Mergers Interests of PMFG Directors and Executive Officers in the Mergers* beginning on page 141.

Accounting Treatment of the Mergers (page 153)

The Mergers will be accounted for by CECO using the purchase method of accounting. Under this method of accounting, the purchase price will be allocated to the fair value of the net assets acquired. The excess purchase price over the fair value of the assets acquired, if any, will be allocated to goodwill.

CECO Board's Reasons for the Mergers (page 95)

In the course of reaching its decision to approve the Merger Agreement, the CECO Board considered a number of factors in its deliberations. Those factors are described in *The Mergers CECO Board's Reasons for the Mergers* beginning on page 95.

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Opinion of CECO's Financial Advisor (page 100 and Annex E)

In connection with the Mergers, Jefferies LLC (Jefferies), CECO's financial advisor, delivered a written opinion, dated May 3, 2015, to the CECO Board as to the fairness, from a financial point of view and as of such date, to CECO of the Merger Consideration to be paid by CECO pursuant to the Merger Agreement. The full text of Jefferies' opinion, which is attached as Annex E to this joint proxy statement/prospectus and is incorporated herein by reference, describes the various assumptions made, procedures followed, matters considered and limitations and qualifications on the review undertaken by Jefferies. The summary of Jefferies' opinion set forth below is qualified in its entirety by reference to the full text of Jefferies' opinion. **Jefferies' opinion was provided for the use and benefit of the CECO Board (in its capacity as such) in its evaluation of the Merger Consideration from a financial point of view to CECO and did not address any other aspect of the Mergers or any other matter. The opinion did not address the relative merits of the Mergers or other transactions contemplated by the Merger Agreement as compared to any alternative transaction or opportunity that might be available to CECO, nor did it address the underlying business decision by CECO to engage in the Mergers. Jefferies' opinion does not constitute a recommendation as to how any stockholder should vote or act in connection with the Mergers or any other matter.** CECO has agreed to pay Jefferies for its financial advisory services in connection with the Mergers an aggregate fee of \$3.25 million, of which a portion was payable upon delivery of Jefferies' opinion and \$2.75 million is payable contingent upon consummation of the First Merger.

Recommendations of the CECO Board (pages 67, 73 and 74)

The CECO Board unanimously recommends that CECO stockholders vote FOR each of the following proposals to be presented at the CECO Special Meeting:

the Share Issuance;

the amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000; and

the adjournment of the CECO Special Meeting, if necessary or appropriate.

PMFG Board's Reasons for the Mergers (page 110)

In the course of reaching its decision to approve the Merger Agreement, the PMFG Board considered a number of factors in its deliberations. Those factors are described in *The Mergers PMFG Board's Reasons for the Mergers and Recommendation of the PMFG Board* beginning on page 110.

Opinion of PMFG's Financial Advisor (page 117 and Annex F)

On May, 3, 2015, Stifel, Nicolaus & Company, Incorporated (Stifel), PMFG's financial advisor, rendered an opinion to the PMFG Board that, based upon and subject to the procedures followed, assumptions made, qualifications, and limitations on the review undertaken and other matters considered by Stifel in preparing its opinion, as of such date, the Merger Consideration to be received by holders of PMFG's common stock from CECO in the Mergers pursuant to the Merger Agreement was fair to such holders of PMFG common stock, from a financial point of view. Stifel's opinion did not address any other aspect or implication of the Mergers or any other agreement, arrangement, or

understanding entered into in connection with the Mergers or otherwise. The full text of Stifel's opinion, dated May 3, 2015, which sets forth, among other things, the procedures followed, assumptions made, matters considered, and limitations on the scope of the review undertaken by Stifel in connection with its opinion, is attached as Annex F to this proxy statement/prospectus and is incorporated into this proxy statement/prospectus by reference in its entirety. Stifel's opinion was provided for the information of the PMFG Board in connection with its consideration of the Mergers and Stifel's opinion does not constitute advice or a recommendation to any holder of PMFG common stock as to how such person should vote or act on any matter relating to the Mergers.

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PMFG paid Stifel for its services as the financial advisor to PMFG in connection with the Mergers a retainer fee of \$125,000, upon execution of its engagement letter, \$500,000 upon delivery of Stifel's opinion, and has agreed to pay Stifel a transaction fee, which is contingent upon successful completion of the Mergers. The transaction fee, which is calculated based on the value of the aggregate Merger Consideration, is currently estimated to be approximately \$2.6 million, the payment of which would be reduced by the retainer fee and the opinion fee. Additionally, PMFG previously paid Stifel a fee of approximately \$1.3 million in connection with PMFG's February 2012 public offering of common stock. Stifel has had no previous engagements with CECO.

Recommendation of the PMFG Board (pages 80, 81 and 82)

The PMFG Board unanimously recommends that PMFG stockholders vote **FOR** each of the following proposals to be presented at the PMFG Special Meeting:

to adopt the Merger Agreement;

to approve the compensation that may become payable to PMFG's named executive officers in connection with the Mergers; and

to approve any proposal made by the chair of the PMFG Special Meeting to adjourn the PMFG Special Meeting.

Interests of CECO Directors and Executive Officers in the Mergers (page 140)

In considering the information described in this joint proxy statement/prospectus, you should be aware that CECO's directors and executive officers may have interests in the Mergers that are different from or in addition to those of CECO stockholders generally. Each of the directors and executive officers of CECO is expected to maintain their position as a director or executive officer with the combined company after completion of the Mergers, and directors and/or executive officers may be awarded bonuses for their work in closing the Mergers. As of the date of this joint proxy statement/prospectus, the CECO Board has not determined whether any such bonuses will be granted to any directors or executive officers. The CECO Board was aware of and considered those interests, among other matters, in reaching its decision to approve the Merger Agreement, the Mergers, and the transactions contemplated by the Merger Agreement.

Interests of PMFG Directors and Executive Officers in the Mergers (page 141)

In considering the information described in this joint proxy statement/prospectus, you should be aware that some of PMFG's directors and executive officers may have economic interests in the Mergers that may be different from or in addition to those of PMFG stockholders generally and those circumstances may create potential conflicts of interest. One of PMFG's non-employee directors, Kenneth Hanks, holds PMFG Options to purchase 4,000 shares of PMFG common stock that will be settled for \$3,600 in cash as of the Effective Time. None of PMFG's non-employee directors hold any outstanding shares of restricted stock, PMFG RSUs or any other interest in PMFG for which they will receive payment other than in their capacity as stockholders of PMFG. See *The Mergers Interests of PMFG Directors and Executive Officers in the Mergers* beginning on page 141.

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PMFG's executive officers hold PMFG Options and PMFG RSUs that will be settled for \$1.2 million in cash as of the Effective Time. PMFG's executive officers also hold unvested shares of restricted stock that will accelerate at the Effective Time with an aggregate value of \$0.7 million. In addition, each of PMFG's executive officers has either an employment agreement or a severance agreement that would entitle the executive officer to receive severance compensation if he is terminated in connection with a change in control. Assuming all six of PMFG's executive officers were terminated under circumstances in which they were entitled to benefits under these agreements, the aggregate amount PMFG's executive officers would receive is \$3.2 million (in addition to the amount for their PMFG Options, shares of restricted stock and PMFG RSUs). See *The Mergers Interests of PMFG Directors and Executive Officers in the Mergers* beginning on page 141 and *The Mergers Golden Parachute Compensation* beginning on page 147 for a discussion of the assumptions used in calculating these amounts and amounts payable to each executive officer.

In addition to the amounts listed above, PMFG's non-employee directors and PMFG's executive officers are entitled to indemnification benefits and CECO has agreed to purchase a tail officers and directors liability policy. No value has been attributed to these indemnification rights or the tail policy. See *The Merger Agreement Indemnification; Directors and Officers Insurance* beginning on page 169.

The PMFG Board was aware of and considered the interests discussed above, among other matters, in reaching its decision to approve the Merger Agreement, the Mergers, and the transactions contemplated by the Merger Agreement.

The Merger Agreement (page 154)

A copy of the Merger Agreement is attached to this joint proxy statement/prospectus as Annex A. You are encouraged to read the Merger Agreement carefully and in its entirety because it is the principal document governing the Mergers.

Conditions to the Closing of the Mergers (page 172)

Mutual Conditions

The obligations of PMFG, CECO, Merger Sub I and Merger Sub II to consummate the Mergers are subject to the satisfaction or waiver of various conditions on or prior to the Effective Time, including the following:

PMFG stockholders' adoption of the Merger Agreement;

CECO stockholders' approval of the Share Issuance;

the expiration or earlier termination of any applicable waiting period under the HSR Act (which occurred on June 12, 2015);

the effectiveness of the registration statement on Form S-4 in which this joint proxy statement/prospectus is included as a prospectus and the lack of any stop order suspending the effectiveness of the registration statement or pending or threatened SEC proceedings to effect a stop order;

the approval for listing on NASDAQ (subject to official notice of issuance) of the shares of CECO common stock to be issued to former PMFG stockholders pursuant to the Merger Agreement; and

the absence of any laws, injunctions, orders, decrees or other legal prohibitions preventing the consummation of the Mergers.

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PMFG Conditions

PMFG's obligation to complete the Mergers is subject to the satisfaction or waiver of additional conditions, which include the following:

the representations and warranties of CECO, Merger Sub I and Merger Sub II being true and correct in all respects (other than *de minimis* inaccuracies with respect to CECO's capitalization and except for certain representations and warranties that are required to be true and accurate in all material respects) when made and as of the closing date of the Mergers (or such other dates as specifically set forth in such representations and warranties);

CECO's performance in all material respects of its agreements, conditions and covenants required under the Merger Agreement; and

since the date of the Merger Agreement, the absence of any events that individually or in the aggregate have had or would reasonably be expected to have a Material Adverse Effect on CECO.

CECO Conditions

CECO's obligation to consummate the Mergers is subject to the satisfaction or waiver of additional conditions, which include the following:

the representations and warranties of PMFG relating to outstanding rights to acquire PMFG capital stock being true and correct in all respects (other than *de minimis* inaccuracies in the aggregate and except for certain representations and warranties that are required to be true and accurate in all material respects) as of the closing date of the Mergers as if made on and as of the closing date of the Mergers;

PMFG's performance in all material respects of its agreements, conditions and covenants required under the Merger Agreement; and

since the date of the Merger Agreement, the absence of any events that individually or in the aggregate have had or would reasonably be expected to have a Material Adverse Effect on PMFG.

The Merger Agreement provides that certain of the conditions described above may be waived. As of the date of this joint proxy statement/prospectus, none of such conditions have been waived by CECO or PMFG and neither currently expects to waive any material condition to the completion of the First Merger. In the event of a material waiver prior to the special stockholders' meetings, CECO and PMFG intend to notify their respective stockholders of any waiver of any material closing condition to the Merger Agreement as soon as possible in advance of the special stockholders' meetings by first class or overnight mail, if possible, and by a press release and the filing of related disclosure with the SEC on Form 8-K. If such material waiver occurs fewer than five days before the special stockholders' meetings, CECO and PMFG will delay the date of the special stockholders' meetings to provide their respective stockholders sufficient time to consider the effect of the waiver.

To the extent a waiver of the closing conditions of the Merger Agreement by any party could render the statements in this joint proxy statement/prospectus materially misleading, CECO and PMFG intend to supplement this joint proxy statement/prospectus and resolicit transaction approvals from their respective stockholders and stockholders, as applicable, to the extent required by law.

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Go-Shop; No Solicitation; Superior Proposals (page 165)

From the date of the Merger Agreement and continuing until 11:59 p.m. New York City time on the date which is the earlier of July 7, 2015 and the date that the PMFG stockholders adopt the Merger Agreement (the *Go-Shop Period End Date*), PMFG may, directly or indirectly, (a) initiate, solicit and encourage any offer, proposal or inquiry regarding a Competing Proposal (as defined in *The Merger Agreement Go-Shop; No Solicitation; Superior Proposals* beginning on page 165) or (b) enter into or participate in discussions or negotiations regarding a Competing Proposal. Within one business day following the *Go-Shop Period End Date*, PMFG is required to notify CECO in writing of the material terms and conditions of any Competing Proposal (including any amendments or modifications thereof) received from any Excluded Party (as defined in *The Merger Agreement Go-Shop; No Solicitation; Superior Proposals* beginning on page 165) and the identity of the Excluded Party.

Following the *Go-Shop Period End Date*, PMFG has agreed not to, directly or indirectly through any person, (a) solicit, initiate, facilitate or respond to, including by way of furnishing non-public information, any inquiries regarding or relating to, or the submission of, any Competing Proposal, (b) engage or participate in discussions or negotiations regarding a Competing Proposal, (c) enter into any letter of intent, term sheet, agreement in principle, merger agreement or other similar agreement or commitment with respect to any Competing Proposal or agree to, approve, endorse or resolve to recommend or approve any Competing Proposal, (d) release any third party from, or waive any provisions of, any confidentiality or standstill or similar agreement in favor of PMFG, or (e) take any action to exempt any third party from the restrictions set forth in Section 203 of the DGCL. However, unless and until PMFG stockholders adopt the Merger Agreement, none of the above restrictions will apply to any actions PMFG may take with respect to proposals or offers from Excluded Parties.

PMFG has also agreed that neither the PMFG Board nor any committee thereof will effect a *Change of Recommendation*, unless:

PMFG has provided prior written notice to CECO, at least 24 hours in advance of the *Change of Recommendation* or termination, of its intention to effect a *Change of Recommendation* in response to the Superior Proposal, or to terminate the Merger Agreement to enter into a definitive agreement with respect to the Superior Proposal, which notice must specify the material terms and conditions of the Superior Proposal (including the identity of the person making the Superior Proposal (as defined in *The Merger Agreement Go-Shop; No Solicitation; Superior Proposals* beginning on page 165));

PMFG and the PMFG Representatives have negotiated with CECO in good faith during the 24-hour period described above to seek to make such adjustments in the terms and conditions of the Merger Agreement that the Competing Proposal ceases to constitute a Superior Proposal; and

the PMFG Board has determined in good faith, after consultation with outside legal counsel, that the failure to effect a *Change of Recommendation* in response to the Superior Proposal, or to terminate the Merger Agreement to enter into a definitive agreement with respect to the Superior Proposal, would be inconsistent with its fiduciary duties under the DGCL (after taking into consideration any adjustments in the terms and conditions of the Merger Agreement definitively offered by CECO).

Termination; Termination Fees (pages 174 and 177)

The Merger Agreement may be terminated at any time prior to the closing of the Mergers by mutual written consent of CECO and PMFG. Either CECO or PMFG may terminate the Merger Agreement if the Effective Time has not occurred on or before November 30, 2015, the required PMFG stockholder approval or CECO stockholder approval is not obtained, or the consummation of the Mergers becomes illegal or otherwise is prevented or prohibited by any governmental authority.

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PMFG may terminate the Merger Agreement (a) pursuant to a Superior Proposal as described below in *The Merger Agreement Go-Shop; No Solicitation; Superior Proposals* beginning on page 165 (b) if there has been a breach of any representation, warranty, covenant or agreement made by CECO, Merger Sub I or Merger Sub II in the Merger Agreement, or a representation or warranty becomes untrue after the date of the Merger Agreement; or (c) if a CECO Triggering Event has occurred (as defined in *The Merger Agreement Go-Shop; No Solicitation; Superior Proposals* beginning on page 165). CECO may terminate the Merger Agreement if there has been a breach of any representation, warranty, covenant or agreement made by PMFG in the Merger Agreement, or any such representation or warranty becomes untrue after the date of the Merger Agreement, or if a PMFG Triggering Event has occurred (as defined in *The Merger Agreement Go-Shop; No Solicitation; Superior Proposals* beginning on page 165).

The Merger Agreement provides that PMFG may be required to pay CECO a termination fee of \$4.8 million if the Merger Agreement is terminated due to PMFG's acceptance of a Superior Proposal, change of board recommendation for the Mergers, breach of the Merger Agreement, or the PMFG Board's failure to publicly recommend against competing proposals, or if PMFG consummate a similar transaction within 12 months of the termination of the Merger Agreement under certain circumstances. If PMFG stockholders do not adopt the Merger Agreement, PMFG will reimburse CECO for up to \$1.6 million in out-of-pocket expenses, which expenses will offset any PMFG termination fee that may otherwise be payable by PMFG.

The Merger Agreement also provides that CECO may be required to pay PMFG a termination fee of \$9.6 million if the Merger Agreement is terminated due to CECO's failure to obtain financing for the Mergers, change of board recommendation to stockholders' meeting, failure to call stockholders' meeting or breach of the Merger Agreement, or due to CECO stockholders' failure to approve the Share Issuance as a result of CECO stockholder's breach of the Voting Agreement. In the event of termination of the Merger Agreement by PMFG if the CECO stockholders approval is not obtained at the CECO Special Meeting, and CECO is not obligated to pay a termination fee to PMFG under the circumstances, CECO will reimburse up to \$1.0 million of PMFG's out-of-pocket expenses.

Financing and Indebtedness of CECO Following the Mergers (page 179)

The Commitment Letter

Each of CECO, Merger Sub I and Merger Sub II has agreed to use its commercially reasonable efforts to take all actions necessary, proper or advisable to arrange and obtain, at or prior to closing of the Mergers, the proceeds of their debt financing described under *Financing and Indebtedness of CECO Following the Mergers Senior Credit Facilities Pursuant to the Commitment Letter* beginning on page 179, including: (a) maintaining in effect the Commitment Letter (including any definitive agreement entered into in connection therewith), (b) negotiating and entering into definitive agreements for such debt financing on the terms and conditions contained in the Commitment Letter; (c) satisfying, or causing their representatives to satisfy, when required by the Commitment Letter, all conditions to obtaining such debt financing; (d) complying with their affirmative and negative covenants relating to such debt financing; and (e) fully enforcing their respective rights under the Commitment Letter, including causing the lenders and any other persons providing such debt financing to fund the debt financing upon closing of the Mergers in accordance with the Commitment Letter.

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CECO, Merger Sub I and Merger Sub II have agreed not to make any amendments or modifications to or replacements of, or grant any waivers of, any condition or other provision or remedy under the Commitment Letter for such debt financing without the prior written consent of PMFG, which consent PMFG may refuse to provide (in its sole discretion) if such amendments, modifications or waivers would (a) materially reduce the aggregate amount of the debt financing as provided in the Commitment Letter as of the date of the Merger Agreement, (b) impose new or additional conditions, or otherwise amend, modify or expand any conditions, in each case, to the receipt by CECO or Merger Sub I, as the case may be, at or prior to the closing of the debt financing, or (c) in any material respect adversely delay or impact the ability of CECO to consummate the Mergers and the other transactions contemplated by the Merger Agreement or to consummate the debt financing at or prior to the closing. CECO has also agreed not to release or consent to the termination of the obligations of the lenders under the Commitment Letter, except for assignments and replacements of an individual lender.

In the event that the Commitment Letter expires or terminates for any reason or any portion of CECO's debt financing becomes reasonably likely to be unavailable, on the terms and conditions, in the manner or from the sources contemplated in the Commitment Letter, (a) CECO must notify PMFG in writing within two days and (b) CECO, Merger Sub I and Merger Sub II must use commercially reasonable efforts to arrange and obtain, and to negotiate and enter into definitive agreements with respect to, alternative financing from alternative financial institutions in an amount sufficient to consummate the transactions contemplated by the Merger Agreement, as promptly as practicable, and to pay the amounts required to consummate the transactions, pay all of its fees and expenses related to the transactions and pay in full the obligations of PMFG under its credit agreement, in each case, with conditions not materially less favorable, taken as a whole, to CECO, Merger Sub I, Merger Sub II and PMFG than the conditions set forth in the Commitment Letter.

CECO, Merger Sub I and Merger Sub II have agreed to indemnify and hold harmless PMFG and its affiliates and its and their respective representatives from and against any losses, damages, claims, costs or expenses suffered or incurred by any of them in connection with CECO's debt financing, and any information utilized in connection therewith.

The Amended and Restated Credit Agreement

While CECO has obtained the Commitment Letter described above, it has continued to evaluate and explore alternative financing options that CECO believes are more favorable to CECO than those described in the Commitment Letter. Currently, CECO expects, simultaneous with the closing of the Mergers, to enter into an Amended and Restated Credit Agreement among CECO, certain CECO subsidiaries, each lender from time to time party thereto, Bank of America as Administrative Agent, Swing Line Lender and an L/C Issuer, and each other L/C Issuer from time to time party thereto (the Amended and Restated Credit Agreement). CECO anticipates that the Amended and Restated Credit Agreement will provide senior credit facilities of \$250 million, approximately \$55 million of which will be used, in lieu of the financing available under the Commitment Letter, to finance the cash portion of the merger consideration. Following the Mergers, approximately \$70 million will be available to draw under the agreement.

Indebtedness of CECO Following the Mergers

In order to complete the Mergers and related transactions, CECO will require additional financing of approximately \$55 million, excluding indebtedness to be assumed from PMFG and the refinancing of CECO's existing indebtedness. Simultaneous with the closing of the Mergers, CECO currently expects to enter into the Amended and Restated Credit Agreement which, as described above, is expected to provide senior credit facilities of \$250 million, an increase from CECO's current credit agreement which provides facilities of \$155 million. The Amended and Restated Credit

Agreement will be used to fund the Mergers and provide enhanced liquidity for the combined company following the Mergers.

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In connection with the Mergers, CECO will also assume and refinance certain existing indebtedness of PMFG and its subsidiaries, the aggregate principal amounts of which were approximately \$16.7 million as of March 28, 2015. Taking into account such indebtedness, CECO's existing indebtedness, and the other indebtedness to be incurred in connection with the Closing of the Mergers, CECO is expected to have approximately \$180 million of debt outstanding following the Mergers.

The Voting Agreement (page 182)

Jason DeZwirek, Chairman of the CECO Board, and Icarus Investment Corp. entered into a Voting Agreement with PMFG pursuant to which Jason DeZwirek and Icarus Investment Corp. have each agreed to vote all shares of CECO common stock beneficially owned by each of them, respectively, for the approval of the Share Issuance. They also have granted PMFG a proxy to vote their respective shares of CECO common stock in such manner. At the close of business on the record date for the CECO Special Meeting, they owned and were entitled to vote, in the aggregate, 3,936,506 shares of CECO common stock, which represented approximately 15.0% of the shares of CECO common stock outstanding on that date.

Material United States Federal Income Tax Consequences (page 197)

The Mergers are intended to qualify as a reorganization under Section 368(a) of the Code, and will so qualify provided that various requirements are met, including that the aggregate value of the shares of CECO common stock issued to PMFG stockholders in the First Merger, valued as of the closing date of the First Merger, is sufficient to meet the continuity of interest requirement, more fully discussed in *Material United States Federal Income Tax Consequences* beginning on page 197. **If the aggregate value of the shares of CECO common stock delivered to PMFG stockholders in the Mergers is not sufficient to meet the continuity of interest requirement, the Mergers will not qualify as a reorganization under Section 368(a) of the Code.**

It will not be known at the time of the CECO Special Meeting or the PMFG Special Meeting whether the requirements referred to in the preceding paragraph will be met and, therefore, whether the Mergers will qualify as a reorganization under Section 368(a) of the Code. Accordingly, the U.S. federal income tax treatment of the Mergers will not be known at such times. CECO will make a public announcement on or soon after the Effective Time as to whether or not the Mergers will be reported as a reorganization under Section 368(a) of the Code. However, neither CECO nor PMFG will resolicit stockholder votes, nor reopen the Merger Consideration election period, in the event that the Mergers do not qualify as a reorganization under Section 368(a) of the Code. Therefore, there is a risk that the intended tax treatment of the Mergers to PMFG stockholders may adversely change following the Election Deadline and the date of the PMFG Special Meeting.

If the Mergers qualify as a reorganization under Section 368(a) of the Code, U.S. holders of PMFG common stock generally will recognize gain, but not loss, equal to the lesser of (a) the amount of cash received in exchange for PMFG common stock in the First Merger and (b) the excess of the amount realized in the transaction (the fair market value of the CECO common stock on the closing date of the First Merger plus the amount of cash received in exchange for PMFG common stock in the First Merger) over their tax basis in their surrendered PMFG common stock. In certain circumstances, such gain could be taxable as a dividend rather than capital gain.

If the Mergers do not qualify as a reorganization under Section 368(a) of the Code, U.S. holders of PMFG common stock generally will recognize capital gain or loss equal to the difference between their tax basis in their shares of PMFG common stock and the sum of the fair market value, on the closing date of the First Merger, of the shares of CECO common stock and cash received in the First Merger in exchange for PMFG common stock (including cash received in lieu of a fractional share of CECO common stock).

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To review the tax consequences to PMFG stockholders in greater detail, see *Material United States Federal Income Tax Consequences* beginning on page 197. You are encouraged to consult your tax advisor as to the tax consequences of the Mergers in your particular circumstances, including the applicability and effect of the alternative minimum tax and any state, local or foreign and other tax laws and of changes in those laws.

Comparison of Rights of Common Stockholders of CECO and Common Stockholders of PMFG (page 204)

Each of CECO and PMFG is a Delaware corporation subject to the provisions of the DGCL. If the Mergers are completed, PMFG stockholders, whose rights are currently governed by the PMFG certificate of incorporation, the PMFG bylaws and the DGCL, will, if they receive CECO common stock as Merger Consideration, become stockholders of CECO and their rights will be governed by the CECO certificate of incorporation, the CECO by-laws and the DGCL.

Appraisal Rights in Connection with the Mergers (page 211)

Pursuant to Section 262 of the DGCL, PMFG stockholders who do not vote in favor of adoption of the Merger Agreement, who continuously hold their shares of PMFG common stock through the Effective Time and who otherwise comply precisely with the applicable requirements of Section 262 of the DGCL have the right to seek appraisal of the fair value of their shares of PMFG common stock, as determined by the Delaware Court of Chancery, if the First Merger is completed. The fair value of your shares of PMFG common stock as determined by the Delaware Court of Chancery could be greater than, the same as, or less than the value of the Merger Consideration that you would otherwise be entitled to receive under the terms of the Merger Agreement.

PMFG stockholders who wish to exercise the right to seek an appraisal of their shares must so advise PMFG by submitting a written demand for appraisal in the form described in this joint proxy statement/prospectus prior to the vote to adopt the Merger Agreement, and must otherwise follow the procedures prescribed by Section 262 of the DGCL. A person having a beneficial interest in shares of PMFG common stock held of record in the name of another person, such as a nominee or intermediary, must act promptly to cause the record holder to follow the steps summarized in this joint proxy statement/prospectus and in a timely manner to perfect appraisal rights. In view of the complexity of Section 262 of the DGCL, PMFG stockholders who may wish to pursue appraisal rights should consult their own legal and financial advisors. See *Appraisal Rights of PMFG Stockholders* beginning on page 211.

CECO stockholders do not have any appraisal rights under the DGCL in connection with the CECO Special Meeting or the Share Issuance.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This joint proxy statement/prospectus, and the documents to which this joint proxy statement/prospectus refers, contains forward-looking statements within the meaning of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. Any statements contained in this joint proxy statement/prospectus, or any such documents, or made by or attributable to CECO or PMFG that are not statements of historical fact, including statements about CECO's or PMFG's beliefs and expectations of the Mergers and related transactions and future results, are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and should be evaluated accordingly. Words such as estimate, believe, anticipate, expect, intend, target, show, will and similar expressions and their negative forms are intended to identify forward-looking statements. These statements are made on the basis of management's views and assumptions regarding future events.

Forward-looking statements are based upon certain underlying assumptions, including any assumptions mentioned with the specific statements, as of the date such statements were made. Such assumptions are in turn based upon internal estimates and analyses of market conditions and trends, management plans and strategies, economic conditions and other factors. While CECO and PMFG believe these expectations, assumptions, estimates, and projections are reasonable, such forward-looking statements are only predictions and involve known and unknown risks and uncertainties, many of which are beyond the control of CECO and PMFG. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend upon future circumstances that may not occur. Actual results may differ materially from any future results, performance or achievements expressed or implied by such statements. These risks and uncertainties include those set forth under *Risk Factors* beginning on page 39, and those set forth under *Forward-Looking Statements*, *Risk Factors* or any similar heading in the documents incorporated by reference to this joint proxy statement/prospectus. In addition, these forward-looking statements include statements regarding:

changes in the value of the Merger Consideration due to fluctuations in the price of CECO common stock;

the risk that PMFG stockholders may not receive the form of Merger Consideration they elect due to the collar limiting the total amount of Cash Consideration and Stock Consideration to be paid in the First Merger;

limitations placed on the ability of CECO and PMFG to operate their respective businesses by the terms of the Merger Agreement;

the ability to complete the Mergers and related transactions between CECO and PMFG;

the potential impact of the announcement or consummation of the proposed transactions on the parties' relationships with third parties, which may make it more difficult to maintain business and operational relationships;

the receipt of regulatory and shareholder approvals;

the ability to satisfy other conditions to the closing of the Mergers for any other reason;

the availability of financing contemplated by the bank commitment obtained by CECO;

changes in or developments with respect to any litigation or investigation;

the risk that some of CECO's and PMFG's executive officers and directors may have financial interests in the Mergers that may be different from, or in addition to, the interests of CECO stockholders and PMFG stockholders;

the potential that failure to consummate the Mergers could negatively impact the stock price and the future business and financial results of CECO or PMFG;

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the ability to successfully integrate CECO's and PMFG's operations, product lines, technologies and employees;

the ability to realize revenue and customer growth opportunities and cost synergies from the proposed merger between CECO and PMFG in a timely manner or at all;

diversion of management time from each of CECO's and PMFG's ongoing operations;

the incurrence of significant transaction and Merger-related costs;

the substantial amount of debt expected to be incurred in connection with the proposed merger and CECO's ability to repay or refinance it, incur additional debt in the future or obtain a certain debt coverage ratio; and

the reduction in the ownership and voting interest of PMFG stockholders in CECO after the Mergers and, as a result, their decreased influence over management.

Many of these risks are beyond management's ability to control or predict. Should one or more of these risks or uncertainties materialize, or should the assumptions prove incorrect, actual results may vary in material aspects from those currently anticipated. Investors are cautioned not to place undue reliance on such forward-looking statements as they speak only as of the date the statement is made. All forward-looking statements attributable to CECO or PMFG or persons acting on behalf of either CECO or PMFG are expressly qualified in their entirety by the cautionary statements and risk factors contained in this joint proxy statement/prospectus and CECO's and PMFG's respective filings with the SEC. Forward-looking statements speak only as of the date they are made.

Except as required under the federal securities laws or the rules and regulations of the SEC, neither CECO nor PMFG undertakes any obligation to update or review any forward-looking statement or information, whether as a result of new information, future events or otherwise.

Table of Contents**RISK FACTORS**

In addition to the other information included in and incorporated by reference into this joint proxy statement/prospectus, PMFG's stockholders should consider carefully the matters described below in determining whether to adopt the Merger Agreement and in determining whether to make a cash election or a stock election for their shares of PMFG common stock. CECO's stockholders should consider carefully the matters described below in determining whether to approve the Share Issuance. Please also refer to the information under the heading *Risk Factors* set forth in Part I, Item IA in each of CECO's Annual Report on Form 10-K for the fiscal year ended December 31, 2014 and PMFG's Annual Report on Form 10-K for the fiscal year ended June 28, 2014, each of which is incorporated by reference into this joint proxy statement/prospectus. Please refer to *Where You Can Find More Information* beginning on page 223.

Risks Relating to the Mergers

At the time PMFG stockholders elect a form of Merger Consideration, PMFG stockholders cannot be sure of the value of the Stock Consideration, which value could be greater than or less than the Cash Consideration.

The Stock Consideration payable in the First Merger will consist of a number of shares of CECO common stock equal to the Exchange Ratio, plus cash (without interest) in lieu of any fractional share of CECO common stock that would otherwise be issued. The actual Exchange Ratio will be determined by dividing (a) \$6.85 by (b) the CECO Average Trading Price. Further, under the terms of the Merger Agreement, the Exchange Ratio is subject to a collar, meaning that in no event will the Exchange Ratio be less than 0.5282 or greater than 0.6456. As such, the actual Exchange Ratio and the value of the Stock Consideration are both subject to fluctuation and will not be known until immediately preceding the closing of the First Merger. See *The Mergers Merger Consideration* beginning on page 132.

The net effect of the collar mechanism is that no further increase in the Exchange Ratio will be made if the CECO Average Trading Price is less than \$10.61 and no further decrease in the Exchange Ratio will be made if the CECO Average Trading Price is greater than \$12.97. This means that PMFG stockholders who elect to receive the Stock Consideration, or who will receive the Stock Consideration as a result of the proration procedures in the Merger Agreement, could receive more or less value for their shares of PMFG common stock than they would have received if they had elected to receive (or received pursuant to proration) the Cash Consideration.

You may receive a form of Merger Consideration different from what you elect, which could have an effect on your tax situation.

Regardless of the cash or stock elections made by PMFG stockholders, the Merger Agreement contains proration procedures that are designed to ensure that \$66.2 (or approximately 45%) of the aggregate consideration that will be paid by CECO will be paid in cash. In addition, PMFG Options and PMFG RSUs will be settled for approximately \$1.6 million in cash from the \$66.2 of the aggregate consideration paid in cash. The remaining approximately 55% of the aggregate consideration will be paid in shares of CECO common stock. If a particular form of Merger Consideration is oversubscribed, then that election will be prorated. Please refer to *The Mergers Electing the Form of Merger Consideration* beginning on page 134. There is a risk that any portion of the Merger Consideration you receive in a form you did not elect could result in tax consequences that differ from those that would have resulted had you received the form of consideration you elected, including the recognition of taxable gain to the extent cash is received. This could also result in your receipt of consideration having a value that is materially different than the value you would have received if you received the form of consideration you elected, which could also affect your tax consequences.

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PMFG stockholders who do not elect a form of Merger Consideration may receive the form of Merger Consideration having the lower value.

PMFG stockholders who make no election as to the form of Merger Consideration to be received, whose elections are not received by the Exchange Agent by the Election Deadline, or whose forms of election are not properly completed or are not signed, will have no control over the forms of Merger Consideration they receive in exchange for their shares of PMFG common stock. These stockholders may receive the Cash Consideration for all of their shares of PMFG common stock, the Stock Consideration for all of their shares, or a combination of the Cash Consideration and the Stock Consideration, depending on elections that have been made by other PMFG stockholders. Because the value of the Stock Consideration and Cash Consideration may differ and because PMFG stockholders making elections will likely take into account the relative values of the Stock Consideration and Cash Consideration in determining what form of election to make, they will likely elect the form of consideration resulting in the higher value. As a result, those PMFG stockholders who fail to make an election are more likely to receive the form of consideration having the lower value (based on the relative values of the Stock Consideration and Cash Consideration as of the last trading day before the First Merger). Please refer to *The Mergers Electing the Form of Merger Consideration Proration and Reallocation Procedures* beginning on page 136.

In addition, after a cash or stock election has been validly made, any subsequent transfer of the shares of PMFG common stock as to which such election related shall automatically revoke such election.

The Merger Agreement subjects CECO and PMFG to restrictions on their respective business activities during the pendency of the Mergers.

The Merger Agreement subjects CECO and PMFG to restrictions on their respective business activities and obligates CECO and PMFG to generally operate their businesses in the ordinary course in all material respects during the pendency of the Mergers. These restrictions could prevent CECO and PMFG from pursuing attractive business opportunities that arise prior to the completion of the Mergers and are outside the ordinary course of business, and otherwise have an adverse effect on CECO's and PMFG's results of operations, cash flows and financial position.

Delay or failure to complete the Mergers would prevent CECO and PMFG from realizing the anticipated benefits of the Mergers and each company would also remain liable for significant transaction costs, including legal, accounting and financial advisory fees.

Any delay in completing the Mergers may significantly reduce the synergies and other benefits anticipated by CECO if it successfully completes the Mergers within the expected timeframe and integrates the businesses of CECO and PMFG. In addition, the market price of each company's common stock may reflect various market assumptions as to whether and when the Mergers will be completed. Consequently, the completion of, the failure to complete, or any delay in the completion of the Mergers could result in significant changes in the respective market prices of CECO or PMFG common stock.

Whether or not the Mergers are completed, the pendency of the transaction could cause disruptions in the businesses of CECO and PMFG, which could have an adverse effect on their businesses and financial results.

These disruptions could include the following:

current and prospective employees may experience uncertainty about their future roles with the combined company or consider other employment alternatives, which might adversely affect CECO's and PMFG's ability to retain or attract their respective key managers and other employees;

current and prospective customers of CECO or PMFG may experience variations in levels of services as the companies prepare for integration or may anticipate change in how they are served and may, as a result, choose to discontinue their service with either company or choose another provider; and

the attention of management of each of CECO and PMFG may be diverted from the operation of the businesses toward the completion of the Mergers.

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Obtaining required approvals and satisfying closing conditions may delay or prevent completion of the Mergers and may significantly reduce the benefits anticipated to be realized from the Mergers or could adversely affect the market price of CECO common stock or PMFG common stock or their future business and financial results.

Completion of the Mergers is subject to various closing conditions, including (a) PMFG's stockholders adopting the Merger Agreement at the PMFG Special Meeting, (b) CECO's stockholders approving the Share Issuance at the CECO Special Meeting and (c) the approval or expiration or termination of the waiting period under the HSR Act (which occurred on June 12, 2015). If such conditions are not satisfied, the Mergers will not be consummated. Such conditions may jeopardize or delay completion of the Mergers or may reduce the anticipated benefits of the Mergers. Further, no assurance can be given that the required consents and approvals will be obtained or that the required conditions to closing will be satisfied. Even if all such consents and approvals are obtained, no assurance can be given as to the terms, conditions and timing of the consents and approvals or that they will satisfy the terms of the Merger Agreement. Please refer to *The Merger Agreement Conditions to the Closing of the Mergers* beginning on page 172 for a discussion of the conditions to the completion of the Mergers and the parties' obligations to cooperate (including certain limitations thereon) with respect to the receipt of certain consents and approvals. If the Mergers are not completed by November 30, 2015, assuming that the parties to the Merger Agreement do not further extend this deadline by written agreement, either CECO or PMFG may terminate the Merger Agreement. Please refer to *The Merger Agreement Termination* beginning on page 174.

CECO and PMFG must each obtain approval of their respective stockholders to consummate the Mergers, which approvals, if delayed or not obtained, may jeopardize or delay the consummation of the Mergers.

The Mergers are conditioned on, among other things, (a) the adoption of the Merger Agreement by the affirmative vote of the holders of a majority of the outstanding shares of PMFG common stock entitled to vote at the PMFG Special Meeting and (b) the approval of the Share Issuance by the affirmative vote of a majority of the votes present, in person or by proxy, and entitled to vote at the CECO Special Meeting. If the PMFG stockholders do not adopt the Merger Agreement or the CECO stockholders do not approve the Share Issuance, then CECO and PMFG cannot complete the Mergers.

If the Merger Agreement is terminated by either CECO or PMFG because the PMFG stockholders did not adopt the Merger Agreement at the PMFG Special Meeting, then in certain circumstances PMFG may be required to pay up to \$1.6 million of costs and expenses incurred by CECO in connection with the Merger Agreement and related transactions. If the Merger Agreement is terminated by either CECO or PMFG because the CECO stockholders did not approve the Share Issuance at the CECO Special Meeting, then in certain circumstances CECO may be required to pay up to \$1.0 million of costs and expenses incurred by PMFG in connection with the Merger Agreement and related transactions.

Regulatory approvals that are required to consummate the Mergers may not be received, may take longer than expected or may impose conditions that are not presently anticipated.

Under the provisions of the HSR Act, the Mergers may not be completed until filings are made with the Antitrust Division of the DOJ and the FTC and the expiration of a 30-calendar day waiting period (unless the waiting period is set to expire on a weekend or federal holiday, in which case the waiting period is automatically extended until 11:59 p.m. of the next business day), or the early termination of that waiting period, following the parties' filings. If the Antitrust Division of the DOJ or the FTC issues a Request for Additional Information and Documentary Material prior to the expiration of the waiting period, the parties must observe a second 30-calendar day waiting period. On May 18, 2015, CECO and PMFG filed their respective notification and report forms under the HSR Act with the Antitrust Division of the DOJ and the FTC.

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Although the FTC granted early termination of the waiting period under the HSR Act on June 12, 2015, private parties who may be adversely affected by the Mergers and individual states may bring legal actions under the antitrust laws in certain circumstances. Although CECO and PMFG believe the consummation of the Mergers will not likely be prevented by antitrust law, there can be no assurance that a challenge to the Mergers on antitrust grounds will not be made or, if a challenge is made, what the result will be. Under the Merger Agreement, CECO and PMFG have agreed to use their reasonable best efforts to obtain all regulatory clearances necessary to consummate the Merger as promptly as reasonably practicable.

In addition, in order to consummate the Mergers, CECO and PMFG may be required to comply with conditions, terms, obligations or restrictions imposed by regulatory entities and such conditions, terms, obligations or restrictions may have the effect of delaying completion of the Mergers, imposing additional material costs on or materially limiting the revenue of CECO after the completion of the Mergers, or otherwise reducing the anticipated benefits to CECO of the Mergers. In addition, such conditions, terms, obligations or restrictions may result in the delay or abandonment of the Mergers.

If the financing contemplated by the Commitment Letter is not available, and alternative financing cannot be secured, the Mergers may not be completed and CECO may be required to pay a termination fee to PMFG.

CECO intends to finance the cash required in connection with the Mergers, including expenses in connection with the Mergers, with debt financing in accordance with the terms of the Commitment Letter or alternative financing, which CECO has continued to evaluate and explore. The Commitment Letter provides for (a) an additional senior secured amortizing term loan facility in the aggregate principal amount of \$27.1 million, (b) an amendment to CECO's existing Credit Agreement, to allow for the Mergers under the Credit Agreement, and (c) replacement facilities to refinance the senior credit facilities under the Credit Agreement, if the amendment to the Credit Agreement and additional term loan facility is not obtained. In the event some or all of the financing contemplated by the Commitment Letter is not available, CECO is obligated to use its commercially reasonable efforts to obtain alternative financing from alternative institutions in an amount sufficient to enable CECO to consummate the Mergers, with conditions not materially less favorable than those contemplated by the Commitment Letter.

Currently, CECO expects to finance the cash requirement for the Mergers through the proposed Amended and Restated Credit Agreement in lieu of the Commitment Letter. The Amended and Restated Credit Agreement is expected to provide for senior credit facilities consisting of: (a) revolving credit commitments in the aggregate amount of \$80 million and (b) a term loan commitment in the aggregate amount of \$170 million. The closing of the financing through both the Commitment Letter and the proposed Amended and Restated Credit Agreement is subject to customary closing conditions. For a more detailed discussion of the Commitment Letter and the proposed Amended and Restated Credit Agreement, see *Financing and Indebtedness of CECO Following the Mergers* beginning on page 179.

If financing cannot be obtained, the Mergers may not be completed. Due to the fact that there is no financing condition in the Merger Agreement, if CECO is unable to obtain funding from its financing sources for the cash required in connection with the Mergers, CECO could be in breach of the Merger Agreement and may be liable to PMFG for damages or a termination fee of \$9.6 million.

Litigation challenging the Mergers could delay or prevent the completion of the Mergers.

PMFG and members of the PMFG Board, CECO, Merger Sub I, Merger Sub II have been named as defendants in three Lawsuits, which were filed on May 17, 2015, June 29, 2015 and July 17, 2015. In the Lawsuits, the plaintiffs seek, among other things (a) to enjoin the completion of the Mergers on the agreed-upon terms, (b) rescission, to the

extent already implemented, of the Merger Agreement or any of the terms therein, and (c) costs and disbursements and attorneys fees, as well as other equitable relief as the respective courts deem proper. Other litigation may be filed by other stockholders of PMFG also challenging the Mergers.

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One of the conditions to the Mergers is that no temporary restraining order, preliminary or permanent injunction, or other order (as defined in the Merger Agreement) issued by any court of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the Mergers shall be in effect; nor shall there be any statute, rule, regulation or order enacted, entered or enforced that prevents or prohibits the consummation of the Mergers. Consequently, if the plaintiffs in any of these actions secure injunctive or other relief prohibiting, delaying or otherwise adversely affecting the defendants' ability to consummate the Mergers, then such injunctive or other relief may prevent the Mergers from becoming effective within the expected time frame or at all. If consummation of the Mergers is prevented or delayed, it could result in substantial costs to CECO and PMFG. In addition, CECO and PMFG could incur significant costs in connection with such lawsuits, including costs associated with the indemnification of PMFG's directors and officers.

CECO's or PMFG's stock price or financial results could give rise to stockholder litigation and potential liability.

In the past, following periods of volatility in the market price of a company's securities, stockholders have instituted class action securities litigation against those companies. If the price of shares of CECO common stock or PMFG common stock declines following the announcement of the Mergers or the price of shares of CECO common stock declines following the completion of the Mergers and such litigation is instituted, it could result in substantial costs and diversion of management attention and resources, which could significantly harm the company's profitability and reputation.

The financial information presented in this joint proxy statement/prospectus for CECO and PMFG may not be fully comparable due to the different fiscal year-ends of each company.

CECO and PMFG have different fiscal year-ends, and PMFG's fiscal year end does not coincide with calendar quarters. CECO's most recent fiscal year ended December 31, 2014, and its most recent fiscal period ended March 31, 2015. PMFG's most recent fiscal year for which financial information is available ended June 28, 2014, and its most recent fiscal period ended March 28, 2015. Because of the different fiscal year-ends of the companies, the historical financial statements and other financial information pertaining to CECO and PMFG cannot be directly compared in any given period. Moreover, because of the different fiscal years of CECO and PMFG, any cyclical trends in financial condition or results of operations of the two companies may not be fully comparable.

Certain directors and executive officers of CECO may have potential conflicts of interest which may influence their support of the approval of the Share Issuance.

Some of CECO's directors and executive officers may have interests in the Mergers that may be different from, or in addition to, those of CECO stockholders generally. Each of the directors and executive officers of CECO is expected to maintain their position as a director or executive officer with the combined company after completion of the Mergers, and directors and/or executive officers may be awarded bonuses for their work in closing the Mergers. As a result, CECO directors and officers may be more likely to support the Share Issuance than if they did not have those interests. As of the date of this joint proxy statement/prospectus, no agreement to award any such a bonus is currently in place.

Table of Contents***Certain directors and executive officers of PMFG may have potential conflicts of interest which may influence their support of the adoption of the Merger Agreement.***

Some of PMFG's directors and executive officers may have interests in the Mergers that may be different from, or in addition to, those of PMFG stockholders generally. One of PMFG's non-employee directors, Kenneth Hanks, holds PMFG Options to purchase 4,000 shares of PMFG common stock that will be settled for \$3,600 in cash as of the Effective Time. Although the PMFG directors will not become directors of CECO after the Mergers, CECO will indemnify and maintain liability insurance for all of the directors of PMFG for their services as directors before the Mergers. In addition, although no employment decisions have been made as of the date of this joint proxy statement/prospectus for the executive officers of PMFG, each of the executive officers will be entitled to severance compensation if his employment is terminated under specific circumstances following the Mergers. The Merger Agreement also provides that the equity awards held by PMFG executive officers and directors will accelerate and be paid in cash in connection with the First Merger. The equity awards held by the PMFG executive officers and directors that will be paid in cash in connection with the First Merger will reduce the aggregate Cash Consideration that would otherwise be paid to PMFG stockholders in the First Merger. Further, unlike the shares held by PMFG stockholders, those equity awards will not be subject to the proration and reallocation procedures in the Merger Agreement in the event that the cash elections by the PMFG stockholders are oversubscribed, as described in more detail in *The Mergers Electing the Form of Merger Consideration* beginning on page 134. In addition, each of PMFG's executive officers has either an employment and severance agreement that would entitle the executive officers to severance compensation if they are terminated in connection with a change in control. See *The Mergers Interests of PMFG Directors and Executive Officers in the Mergers* beginning on page 141 and *The Mergers Golden Parachute Compensation* beginning on page 147 for a discussion of these interests for each executive officer. As a result, PMFG directors and executive officers may be more likely to support the adoption of the Merger Agreement than if they did not have those interests.

The exercise of PMFG's directors and executive officers' discretion in agreeing to changes or waivers in the terms of the Merger Agreement may result in a conflict of interest when determining whether such changes to the terms of the Merger Agreement or waivers of conditions are appropriate and in PMFG's stockholders' best interest.

In the period leading up to the closing of the First Merger, events may occur that would cause PMFG to agree to amend the Merger Agreement, to consent to certain actions taken by CECO, or to waive rights that PMFG is entitled to under the Merger Agreement. Such events could arise because of a request by CECO to undertake actions that would otherwise be prohibited by the terms of the Merger Agreement. In any of those circumstances, the PMFG Board would have discretion as to whether to grant its consent or waive its rights. As of the date of this joint proxy statement/prospectus, PMFG does not believe there will be any changes or waivers that its directors and officers would be likely to make after stockholder adoption of the Merger Agreement has been obtained. However, the financial and personal interests of PMFG's directors and executive officers may result in a conflict of interest on the part of one or more of the directors or the executive officers between what he or she may believe is best for PMFG and what he or she may believe is best for himself or herself in determining whether or not to take the requested action. Although certain changes could be made without further stockholder approval, PMFG will circulate a new or amended joint proxy statement/prospectus and resolicit approval of the First Merger from its stockholders, to the extent required by law, if changes to the terms of, or waivers under, the Merger Agreement could render the statements in this joint proxy statement/prospectus materially misleading.

If the Mergers are not completed, the price of PMFG common stock and future business and operations could be harmed.

If the Mergers are not completed, PMFG may be subject to material risks, including:

if PMFG Board seeks another merger or business combination, PMFG stockholders cannot be certain that PMFG will be able to find a party willing to offer equivalent or more attractive consideration than the Merger Consideration CECO has agreed to provide in the First Merger;

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failure to complete the Mergers may result in negative publicity and a negative impression of PMFG in the investment community;

the price of PMFG common stock may decline to the extent that the current market price of PMFG common stock reflects a higher price than it otherwise would have based on the assumption that the Mergers will be completed;

certain of PMFG's costs related to the Mergers, such as legal, accounting and certain financial advisory fees, must be paid even if the Mergers are not completed;

the diversion of management attention from PMFG's day-to-day business and the unavoidable disruption to its employees and its relationships with clients as a result of efforts and uncertainties relating to the Mergers may detract from PMFG's ability to grow revenue and minimize costs, which, in turn, may lead to a loss of market position that PMFG could be unable to regain if the Mergers do not occur; and

under the Merger Agreement, PMFG is subject to certain restrictions on the conduct of its business prior to completing the Mergers, which may affect its ability to execute certain of its business strategies.

Stockholders may sell substantial amounts of PMFG common stock in the public market, which is likely to depress the price of PMFG common stock, particularly following an announcement, or anticipated announcement, that the Mergers may not be completed.

A significant number of shares of PMFG common stock may be sold at any time prior to the Mergers. If PMFG's current stockholders sell PMFG common stock in the public market prior to the Mergers, it is likely that arbitrageurs will acquire such shares. These arbitrageurs would likely sell all such shares in the public market immediately following any announcement, or anticipated announcement, that the Mergers failed, or will likely fail, to close for any reason, which in turn would likely cause the market price of PMFG common stock to decline. In addition to the other negative effects on PMFG, such sales of PMFG common stock might make it more difficult for PMFG to sell equity or equity-related securities in the future if the Mergers are not completed.

The U.S. federal income tax treatment of the Mergers will not be known at the Election Deadline or the time of the CECO Special Meeting or the PMFG Special Meeting, and any position taken that the Mergers qualify as a reorganization might be challenged successfully by the Internal Revenue Service.

The U.S. federal income tax consequences of the Mergers to PMFG stockholders will depend on whether the Mergers qualify as a reorganization under Section 368(a) of the Code. If on or before the closing date of the First Merger, PMFG receives an opinion from its counsel, Jones Day, and CECO receives an opinion from its counsel, Squire Patton Boggs (US) LLP, to the effect, in each case, that the Mergers qualify as a reorganization under Section 368(a) of the Code, then PMFG and CECO will each report the Mergers as such for U.S. federal income tax purposes. If either PMFG or CECO does not receive such an opinion, PMFG and CECO will each treat the Mergers as a taxable disposition of the PMFG common stock by the PMFG stockholders to CECO.

If the Mergers qualify as a reorganization under Section 368(a) of the Code, U.S. holders of PMFG common stock generally will recognize gain, but not loss, equal to the lesser of (a) the amount of cash received in exchange for PMFG common stock in the First Merger or (b) the excess of the amount realized in the transaction (the fair market

value of CECO common stock on the closing date of the First Merger plus the amount of cash received in exchange for PMFG common stock in the First Merger) over their tax basis in their surrendered PMFG common stock. If the Mergers do not qualify as a reorganization under Section 368(a) of the Code, U.S. holders of PMFG common stock generally will recognize capital gain or loss equal to the difference between their tax basis in their shares of PMFG common stock and the sum of the fair market value, on the closing date of the First Merger, of the CECO common stock and cash received in exchange for PMFG common stock.

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Delivery of tax opinions is not a condition to the closing of the Mergers and no assurance can be given that the opinions will be delivered.

The tax treatment of the Mergers will not be known at the Election Deadline or prior to the Effective Time. Therefore, it will not be known at the PMFG Special Meeting whether the opinions will be delivered. CECO will make a public announcement on or soon after the Effective Time as to whether the opinions have been delivered. Neither CECO nor PMFG will resolicit stockholder votes, nor reopen the Merger Consideration election period, in the event that the Mergers do not qualify as a reorganization under Section 368(a) of the Code.

Furthermore, even if each counsel's opinion is received and the parties treat the Mergers as a reorganization under Section 368(a) of the Code, the Internal Revenue Service (the "IRS") might successfully assert a contrary position.

Risks Relating to the Combined Company Following the Mergers

The integration of CECO and PMFG following the Mergers may present significant challenges and impair CECO's ability to realize the anticipated benefits of the Mergers in the anticipated time frame or at all.

CECO's ability to realize the anticipated benefits of the Mergers will depend, to a large extent, on CECO's ability to integrate PMFG's businesses into CECO in the anticipated time frame or at all. CECO may face significant challenges in combining PMFG's operations into its operations in a timely and efficient manner. The combination of two independent businesses is a complex, costly and time-consuming process. As a result, CECO will be required to devote significant management attention and resources to integrating the business practices and operations of PMFG into CECO. The integration process may disrupt the businesses and, if implemented ineffectively or inefficiently, would preclude realization of the full benefits expected by CECO and PMFG. The failure to successfully integrate PMFG into CECO and to manage the challenges presented by the integration process successfully may result in an interruption of, or loss of momentum in, the business of CECO or PMFG, which may have the effect of depressing the market price of CECO common stock following the Effective Time.

CECO may be unable to realize anticipated cost synergies or may incur additional costs.

CECO has identified approximately \$15.0 million in pre-tax cost synergies, which are expected to be realized over 24 months following consummation of the Mergers. CECO expects that these will result from combining the sales and general and administrative functions of the two companies. To realize these synergies, CECO expects to incur costs of approximately \$3 million over a 24-month period after the closing of the Mergers. While CECO's management believes that these cost synergies are achievable, CECO may be unable to realize all of these cost synergies within the time frame expected or at all. In addition, CECO may incur additional or unexpected costs in order to realize these cost synergies.

The Mergers may not be accretive and may cause dilution to the combined company's earnings per share, which may negatively affect the price of the common stock of the combined company following completion of the Mergers.

CECO currently anticipates that the Mergers will be accretive to the earnings per share of the combined company in 2016 by approximately 7.2% on a non-GAAP basis (or dilutive by approximately 2.1% on a GAAP basis) and in 2017 by approximately 12.4% on a non-GAAP basis (or accretive by approximately 5.1% on a GAAP basis). This expectation is based on preliminary estimates and assumes certain synergies expected to be realized by the combined company over a 24-month period following the completion of the Mergers, including \$15.0 million of cost savings. Such estimates and assumptions could materially change due to additional transaction-related costs, delays in

regulatory approvals, the failure to realize any or all of the benefits expected in the Mergers or other factors beyond the control of CECO and PMFG. All of these factors could delay, decrease or eliminate the expected accretive effect of the Mergers and cause resulting dilution to the combined company's earnings per share or to the price of the common stock of the combined company.

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The unaudited pro forma financial statements are presented for illustrative purposes only and should not be viewed as a forecast of CECO's financial condition or results of operations following the Mergers.

The unaudited pro forma financial statements have been derived from the historical financial statements of CECO and PMFG and certain adjustments and assumptions have been made regarding CECO after giving effect to the Mergers. The information upon which these adjustments and assumptions have been made is preliminary, and these kinds of adjustments and assumptions are difficult to make with complete accuracy. Moreover, the unaudited pro forma financial statements do not reflect all costs that are expected to be incurred or savings to be achieved by the combined company in connection with the Mergers. For example, neither the impact of any incremental costs incurred in integrating the two companies nor any potential cost savings is reflected in the unaudited pro forma financial statements. As a result, the actual financial condition and results of operations of CECO following the Mergers will likely not be consistent with, or evident from, and may differ materially from, these unaudited pro forma financial statements. In addition, the assumptions used in preparing the unaudited pro forma financial information may not prove to be accurate, and other factors may affect CECO's financial condition or results of operations following the Mergers. Therefore, stockholders of CECO and the stockholders of PMFG should not place undue reliance on the pro forma financial statements when deciding whether to vote for their respective proposals relating to the Mergers. Please refer to *Unaudited Pro Forma Condensed Combined Financial Statements* beginning on page 185.

CECO will incur significant transaction costs related to the Mergers.

CECO expects to incur approximately \$6.7 million of transaction costs related to the Mergers. In addition, CECO will incur integration and restructuring costs following the completion of the Mergers as it integrates the businesses of PMFG with those of CECO. Although CECO expects that the realization of efficiencies related to the integration of the businesses will offset incremental transaction, integration and restructuring costs over time, CECO cannot give any assurance that this net benefit will be achieved in the near term, or at all.

CECO will have a substantial amount of debt outstanding following the Mergers and may incur additional indebtedness in the future, which could restrict CECO's ability to pay dividends and fund working capital and planned capital expenditures.

CECO will incur approximately \$55 million of additional debt in order to complete the Mergers and repay PMFG's debt. Following the Mergers, CECO is expected to have approximately \$180 million of debt outstanding. This amount of leverage could have important consequences, including:

CECO may be required to use a substantial portion of CECO's cash flow from operations to make interest payments on CECO's debt, which will reduce funds available for operations, future business opportunities and dividends;

CECO may have limited flexibility to react to changes in CECO's business and its industry;

it may be more difficult for CECO to satisfy its other obligations;

CECO may have a limited ability to borrow additional funds or to sell assets to raise funds if needed for working capital, capital expenditures, acquisitions or other purposes;

CECO may become more vulnerable to general adverse economic and industry conditions, including changes in interest rates; and

CECO may be at a disadvantage compared to its competitors that have less debt.

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CECO currently expects its cash interest expense to be approximately \$6 million in fiscal year 2016 assuming consummation of the Mergers by December 31, 2015. Future interest expense will be significantly higher than historic interest expense as a result of higher levels of indebtedness incurred to consummate the Mergers. CECO's ability to make payments on its debt and to pay dividends on its common stock will depend on its ability to generate cash in the future, which will depend on many factors beyond its control. CECO cannot assure you that:

its business will generate sufficient cash flow from operations to service and repay its debt, pay dividends on its common stock and fund working capital and planned capital expenditures;

future borrowings will be available under its credit facilities or any future credit facilities in an amount sufficient to enable it to repay its debt, pay dividends on its common stock and fund working capital and planned capital expenditures; or

it will be able to refinance any of its debt on commercially reasonable terms or at all.

If CECO cannot generate sufficient cash from its operations to meet its debt service obligations, CECO may need to reduce or delay capital expenditures, the development of its business generally and any acquisitions. If CECO becomes unable to meet its debt service and repayment obligations, CECO would be in default under the terms of its credit agreement, which would allow its lenders to declare all outstanding borrowings to be due and payable. If the amounts outstanding under its credit facilities were to be accelerated, CECO cannot assure you that its assets would be sufficient to repay in full the money owed.

Restrictions in CECO's debt agreements may prevent CECO from paying dividends.

CECO's ability to pay dividends will be restricted by current and future agreements governing its debt, including its current credit agreement and the financing agreements expected to be in place upon consummation of the First Merger. Please refer to *Financing and Indebtedness of CECO Following the Mergers* beginning on page 179.

The aggregate ownership and voting interest of the current PMFG stockholder in CECO after the Mergers will be lower than they currently have in PMFG and they will exercise less influence over management of CECO than they currently exercise over management of PMFG.

After the Effective Time, PMFG stockholders who receive the Stock Consideration in the First Merger will own in the aggregate a significantly smaller percentage of CECO common stock than they currently own of PMFG common stock. Immediately following the Mergers, those stockholders are expected to own in the aggregate (excluding any shares of CECO common stock they may own or acquire prior to consummation of the First Merger) between approximately 19.0% and 22.3% of the outstanding shares of CECO common stock, based on the number of shares of CECO common stock and PMFG common stock outstanding on July 30, 2015. Consequently, if CECO's management pursues strategies or undertakes risks that differ from the investment preferences of PMFG's stockholders, PMFG stockholders will have less influence over the management and policies of CECO than they currently exercise over the management and policies of PMFG.

The shares of CECO common stock to be received by PMFG stockholders as a result of the First Merger will have different rights from the shares of PMFG common stock.

PMFG stockholders' rights are currently governed by the PMFG certificate of incorporation, the PMFG bylaws and Delaware law. Those PMFG stockholders who receive the Stock Consideration in the First Merger will, upon completion of the First Merger, become stockholders of CECO and their rights will be governed by the CECO certificate of incorporation, the CECO by-laws and Delaware law. Please refer to *Comparison of Rights of Common Stockholders of CECO and Common Stockholders of PMFG* beginning on page 204.

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The Share Issuance may cause the market price of CECO common stock to decline.

In connection with the completion of the Mergers, based on the number of shares outstanding on July 30, 2015 CECO expects to issue between 6.2 million and 7.6 million shares of CECO common stock, which will represent between 19.0% and 22.3% of the issued and outstanding shares of CECO after completion of the Mergers. CECO expects that some PMFG stockholders who receive CECO shares are likely to sell them promptly, especially PMFG stockholders who elected to receive the Cash Consideration. Both the issuance of this amount of new shares and the subsequent sales of these shares may cause the market price of CECO common stock to decline.

Risks Relating to PMFG

PMFG is, and will continue to be, subject to the risks described in Part I, Item 1A in PMFG's Annual Report on Form 10-K for the year ended June 28, 2014, and incorporated by reference into this joint proxy statement/prospectus. See *Where You Can Find More Information* beginning on page 223 for the location of the PMFG information incorporated by reference into this joint proxy statement/prospectus.

Risks Relating to CECO

CECO is, and will continue to be, subject to the risks described in Part I, Item 1A in CECO's Annual Report on Form 10-K for the year ended December 31, 2014, and incorporated by reference into this joint proxy statement/prospectus. See *Where You Can Find More Information* beginning on page 223 for the location of the CECO information incorporated by reference into this joint proxy statement/prospectus.

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THE COMPANIES

CECO, Merger Sub I and Merger Sub II

CECO is a leading global environmental technology company focused on critical solutions in the product recovery, air pollution control, fluid handling and filtration industries. CECO was incorporated in the State of New York in 1966 and reincorporated in the State of Delaware in January 2002. CECO has been publicly traded since January 1, 1978 and its common stock currently trades on NASDAQ under the symbol CECE.

CECO operates through three principal groups, each of which is a reportable segment: (1) Air Pollution Control, (2) Energy and (3) Fluid Handling and Filtration. By combining the efforts of certain or all of these segments, CECO is able to offer complete full systems to our customers and leverage the operational efficiencies between its family of technology companies.

During 2014, CECO operated its business under the following three reportable segments:

Air Pollution Control Segment, product recovery and air pollution control technologies, comprised of the following: Adwest Technologies, Inc., HEE-Duall Air and Odor Technologies, Busch International, Entrol-Buell Energy Cyclones, Flex-Kleen Dust Collection Technologies, Fisher-Klosterman, Kirk & Blum, KB Duct and SAT Technology.

Energy Segment, customized solutions for the power and petrochemical industry, comprised of the following: Aarding Thermal Acoustics, Effox-Flexor, AVC Specialists and Zhongli.

Fluid Handling and Filtration Segment, high quality pump, filtration and fume exhaust solutions, comprised of the following: Met-Pro Global Pump Solutions, Mefiag Filtration Solutions, Keystone Filtration Solutions, CECO Filters and Strobic Air.

CECO's principal executive offices are located at 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227 and the telephone number at that location is (513) 458-2600.

Top Gear Acquisition Inc. is a Delaware corporation and Top Gear Acquisition II LLC is a Delaware limited liability company. Each is a wholly owned subsidiary of CECO. Both of these companies were incorporated on April 30, 2015 solely for the purpose of effecting the Mergers, pursuant to the Merger Agreement.

Additional information about CECO and its subsidiaries is included in the CECO documents incorporated by reference into this joint proxy statement/prospectus. Please refer to *Where You Can Find More Information* beginning on page 223.

PMFG

PMFG, Inc. was incorporated in Delaware on August 15, 2008, as part of a holding company reorganization. Through its operating subsidiary, Peerless Mfg. Co., PMFG has been in business for over 80 years. PMFG is a leading provider of custom-engineered systems and products designed to help ensure that the delivery of energy is safe, efficient and clean.

PMFG primarily serves the markets for natural gas infrastructure, power generation and refining and petrochemical processing. With the acquisition in March 2014 of substantially all of the assets of Combustion Components Associates, Inc., PMFG expanded the markets it serves to include industrial and utility industries. PMFG offers a broad range of separation and filtration products, Selective Catalytic Reduction systems, Selective Non-Catalytic Reduction systems, low emissions burner and related combustion systems and other complementary products including pulsation dampeners and silencers. Its primary customers include original equipment manufacturers, engineering contractors, commercial and industrial companies and operators of power facilities. PMFG works closely with customers to design, custom-engineer and fabricate its systems and products to meet its customers' specific needs. Its products and systems are marketed worldwide. In the fiscal year ended June 28, 2014, PMFG generated over \$130 million in revenue and ended the fiscal year with approximately 500 employees.

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PMFG's Process Products segment produces specialized systems and products that remove contaminants from gases and liquids, improving efficiency, reducing maintenance and extending the life of energy infrastructure. The segment also includes industrial silencing equipment to control noise pollution on a wide range of industrial processes.

PMFG's Environmental Systems segment designs, engineers and installs highly efficient systems for combustion modification, fuel conversions and post-combustion nitrogen oxide control for both new and existing sources. These environmental control systems are used for air pollution abatement and converting burners to accommodate alternative sources of fuel. System applications include combustion systems, Selective Catalytic Reduction systems and Selective Non-Catalytic systems.

PMFG common stock, \$0.01 par value per share, is traded on NASDAQ under the symbol PMFG.

PMFG's principal executive offices are located at 14651 Dallas Parkway, Suite 500, Dallas, Texas 75254 and the telephone number is (214) 357-6181.

Additional information and PMFG and its subsidiaries is included in documents incorporated by reference into this joint proxy statement/prospectus. Please refer to *Where You Can Find More Information* beginning on page 223.

Material Contracts Between CECO and PMFG

Except as set forth in this joint proxy statement/prospectus, since January 1, 2012 neither CECO nor any of CECO's affiliates, including Merger Sub I and Merger Sub II, have any past, present or proposed material contracts, arrangements, understandings, relationships, negotiations or transactions with PMFG or PMFG's affiliates, including with respect to: (a) a merger, consolidation or acquisition, other than the Merger Agreement; (b) a tender offer or other acquisition of securities, other than the Merger Agreement; (c) an election of directors, other than the constitution of the PMFG Board following closing of the Mergers pursuant to the Merger Agreement; or (d) a sale or other transfer of a material amount of assets, other than as contemplated pursuant to the Merger Agreement.

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SELECTED HISTORICAL CONSOLIDATED FINANCIAL INFORMATION OF CECO

The following table sets forth selected historical consolidated financial information for CECO and its subsidiaries as of and for the fiscal years ended December 31, 2014, 2013, 2012, 2011 and 2010 and for the three months ended March 31, 2015 and 2014. The statement of income data for each of the three fiscal years ended December 31, 2014, 2013 and 2012 and the balance sheet data as of December 31, 2014 and 2013 have been obtained from CECO's audited consolidated financial statements contained in its Annual Report on Form 10-K for the fiscal year ended December 31, 2014, which are incorporated by reference into this joint proxy statement/prospectus. The statement of income data for the years ended December 31, 2011 and 2010 and the balance sheet data as of December 31, 2012, 2011 and 2010 have been obtained from CECO's audited consolidated financial statements for such years, which are not incorporated into this document by reference. The statement of income data for the three months ended March 31, 2015 and 2014 and the balance sheet data as of March 31, 2015 have been obtained from CECO's unaudited consolidated financial statements included in its Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, which is incorporated by reference into this joint proxy statement/prospectus. The balance sheet data as of March 31, 2014 have been obtained from CECO's unaudited consolidated financial statements for the quarter ended March 31, 2014, which are not incorporated into this document by reference. In the opinion of CECO's management, the unaudited consolidated financial data include all adjustments, consisting of only normal recurring adjustments, considered necessary for a fair statement of this information.

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The information set forth below should be read in conjunction with CECO's Management's Discussion and Analysis of Financial Condition and Results of Operations included in CECO's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, and included in CECO's Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2015, which are incorporated by reference in this joint proxy statement/prospectus. For additional information on documents incorporated by reference in this joint proxy statement/prospectus, see *Where You Can Find More Information* beginning on page 223.

	Three months ended March 31, March 31, 2015 2014 (Unaudited)		Years ended December 31, 2014 2013 2012 2011 2010				
	(In thousands, except per share data)						
Selected Operating Statement Data(1)							
Net sales	\$ 80,985	\$ 57,170	\$ 263,217	\$ 197,317	\$ 135,052	\$ 139,192	\$ 140,602
Gross profit	20,975	19,729	84,823	61,555	42,443	38,168	32,653
Income from continuing operations	2,979	5,492	21,663	6,972	16,683	11,723	3,676
Net income	198	3,021	13,077	6,557	10,850	8,272	2,105
Basic earnings per common share	0.01	0.12	0.51	0.33	0.73	0.58	0.15
Diluted earnings per common share	0.01	0.12	0.50	0.32	0.65	0.51	0.15
Selected Balance Sheet Data							
Current assets	\$ 151,021	\$ 114,387	\$ 142,967	\$ 124,436	\$ 64,321	\$ 53,470	\$ 48,452
Current liabilities	83,874	49,027	75,351	59,333	27,540	23,609	26,497
Working capital	67,147	65,360	67,616	65,103	36,781	29,861	21,955
Current ratio	1.80	2.33	1.90	2.10	2.34	2.26	1.83
Total assets	417,428	335,807	414,365	349,210	94,104	79,345	74,791
Short-term debt	11,463	6,909	8,887	9,922			
Long-term debt(2)	101,442	75,264	103,541	79,160		9,600	10,800
Shareholders' equity	179,332	171,868	181,224	170,406	61,994	42,990	35,174
Total capitalization	280,774	247,132	284,765	249,566	61,994	52,590	45,974
Other Financial Data							
Dividends declared per common share	\$ 0.066	\$ 0.05	\$ 0.23	\$ 0.21	\$ 0.16	\$ 0.05	\$
Dividends paid	1,739	1,284	5,937	4,337	2,460	728	
Weighted average shares outstanding basic	26,271	25,606	25,751	20,117	14,813	14,386	14,308
Weighted average shares outstanding diluted	26,661	26,116	26,197	20,720	17,246	17,115	17,102

(1)

Results of operations from acquired businesses are included from the date of acquisition forward. The fair value of assets and liabilities, inclusive of changes resulting from operating the businesses, are included in the first period ended after the date of each acquisition, and all periods thereafter. Acquisitions consist of the following: (i) Adwest Technologies, Inc. in December 2012, (ii) Aarding Thermal Acoustics B.V. in March 2013, (iii) Met-Pro in August 2013, (iv) HEE Environmental Engineering in August 2014, (v) SAT Technology, Inc. in September 2014, (vi) Emtrol LLC in November 2014, and (vii) Jiangyin Zhongli Industrial Technology Co. Ltd. in December 2014.

- (2) Long-term debt as of December 31, 2011 and 2010 consisted of convertible subordinated notes, including \$3,950 to related parties for both periods.

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SELECTED HISTORICAL CONSOLIDATED FINANCIAL INFORMATION OF PMFG

The following table sets forth selected historical consolidated financial information for PMFG and its subsidiaries as of and for the fiscal years ended June 28, 2014, June 29, 2013, June 30, 2012, July 2, 2011 and June 30, 2010 and for the nine months ended March 28, 2015 and March 29, 2014. The statement of operations data for each of the three fiscal years ended June 28, 2014, June 29, 2013, and June 30, 2012 and the balance sheet data as of June 28, 2014 and June 29, 2013 have been obtained from PMFG's audited consolidated financial statements contained in its Annual Report on Form 10-K for the fiscal year ended June 28, 2014, which are incorporated by reference into this joint proxy statement/prospectus. The statement of operations data for the years ended July 2, 2011 and June 30, 2010 and the balance sheet data as of June 30, 2012, July 2, 2011, and June 30, 2010 have been obtained from PMFG's audited consolidated financial statements for such years, which are not incorporated into this document by reference. The statement of operations data for the nine months ended March 28, 2015 and March 29, 2014 and the balance sheet data as of March 28, 2015 have been obtained from PMFG's unaudited consolidated financial statements included in its Quarterly Report on Form 10-Q for the quarter ended March 28, 2015, which is incorporated by reference into this joint proxy statement/prospectus. The balance sheet data as of March 29, 2014 have been obtained from PMFG's unaudited consolidated financial statements for the quarter ended March 29, 2014, which are not incorporated into this document by reference. In the opinion of PMFG's management, the unaudited consolidated financial data include all adjustments, consisting of only normal recurring adjustments, considered necessary for a fair statement of this information.

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The information set forth below should be read in conjunction with PMFG's Management's Discussion and Analysis of Financial Condition and Results of Operations included in PMFG's Annual Report on Form 10-K for the fiscal year ended June 28, 2014, and included in PMFG's Quarterly Report on Form 10-Q for the fiscal quarter ended March 28, 2015, which are incorporated by reference in this joint proxy statement/prospectus. For additional information on documents incorporated by reference in this joint proxy statement/prospectus, see *Where You Can Find More Information* beginning on page 223.

	Nine months ended			Fiscal year ended			
	March 28, 2015	March 29, 2014	June 28, 2014	June 29, 2013	June 30, 2012	July 2, 2011	June 30, 2010
	(Unaudited)						
	(In thousands, except per share data)						
Selected Operating Statement Data:							
Revenue	\$ 120,945	\$ 90,958	\$ 130,650	\$ 133,892	\$ 135,318	\$ 121,794	\$ 116,775
Gross profit	36,212	25,878	35,896	46,800	41,235	38,407	42,435
Operating income (loss)	(1,154)	(6,852)	(37,240)	818	475	(2,227)	8,348
Net earnings (loss)	(1,545)	(8,259)	(38,318)	(1,488)	(1,038)	5,861	(4,182)
Less net earnings (loss) attributable to non-controlling interest	263	117	66	592	(62)	112	(19)
Net earnings (loss) attributable to PMFG, Inc.	(1,808)	(8,376)	(38,384)	(2,080)	(976)	5,749	(4,163)
Dividends on preferred stock						(722)	(1,044)
Earnings (loss) applicable to PMFG, Inc. common stockholders	\$ (1,808)	\$ (8,376)	\$ (38,384)	\$ (2,080)	\$ (976)	\$ 5,027	\$ (5,207)
Basic earnings (loss) per share	\$ (0.09)	\$ (0.40)	\$ (1.82)	\$ (0.10)	\$ (0.05)	\$ 0.29	\$ (0.38)
Diluted earnings (loss) per share	\$ (0.09)	\$ (0.40)	\$ (1.82)	\$ (0.10)	\$ (0.05)	\$ 0.28	\$ (0.38)

Selected Balance Sheet**Data:**

Current assets	\$ 105,886	\$ 113,781	\$ 104,834	\$ 108,473	\$ 122,286	\$ 81,139	\$ 82,306
Current liabilities	54,697	51,994	49,725	33,471	45,019	37,231	34,306
Working capital	51,189	61,787	55,109	75,002	77,267	43,908	48,000
Current ratio	1.94	2.19	2.11	3.24	2.72	2.18	2.40
Total assets	166,961	200,330	167,223	180,111	183,279	140,709	143,081
Current maturities of long-term debt	2,409	2,210	2,408			2,600	4,000
Long-term debt, net of current portion	12,748	15,160	14,149	8,719		9,971	16,221
Total equity (1)	93,717	127,205	97,472	131,886	130,886	85,041	57,147
Total capitalization	106,465	142,365	111,621	140,605	130,886	95,012	73,368

Other Financial Data:

Dividends declared per common share	\$	\$	\$	\$	\$	\$	\$
Dividends paid	\$	\$	\$	\$	\$	\$	\$
Weighted average shares outstanding Basic	21,266	21,092	21,086	20,930	18,810	16,091	13,716
Weighted average shares outstanding Diluted	21,266	21,092	21,086	20,930	18,810	16,662	13,716

- (1) The increase in PMFG stockholders' equity in fiscal 2012 resulted primarily from a public offering of PMFG common stock, and the increase in PMFG stockholders' equity in fiscal 2011 resulted primarily from the conversion of preferred stock to common stock during the year and PMFG's net earnings for the year.

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**ADJUSTED UNAUDITED PMFG INFORMATION
(TO ACCOUNT FOR DIFFERENT FISCAL YEAR ENDS)**

CECO's most recent fiscal year end was December 31, 2014, and PMFG's most recent fiscal year end for which financial information was available was June 28, 2014. In order to provide stockholders with more comparable information, and for the purpose of preparing unaudited pro forma information, PMFG has computed certain financial information for PMFG as if PMFG's most recent fiscal year end was December 31, 2014. This information is unaudited and derived from PMFG's audited financial statements as of June 28, 2014, and its unaudited financial statements as of December 27, 2014, December 28, 2013 and March 28, 2015. Management of CECO and PMFG believe this presentation provides holders with better information given the presentation of comparable results for equal twelve-month periods.

The table below contains the pro forma income statement of PMFG for the twelve months ended December 27, 2014. This information was derived as follows:

1. For each line item, the information for the six months ended December 28, 2013 (from PMFG's Quarterly Report on Form 10-Q for the six months ended December 28, 2013) was subtracted from the information for the twelve months ended June 28, 2014 (from PMFG's Annual Report on Form 10-K for the year ended June 28, 2014). This produced the information for the six months ended June 28, 2014.
2. The information for the six months ended June 28, 2014 was then added to the information for the six months ended December 27, 2014 (from PMFG's Quarterly Report on Form 10-Q for the six months ended December 27, 2014) to derive information for the twelve months ended December 27, 2014.

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The table below also contains the unaudited income statement of PMFG for the three months ended March 28, 2015. This information was derived from PMFG's Quarterly Report on Form 10-Q for the nine months ended March 28, 2015. In preparing the following presentation, certain reclassifications were made to PMFG's publicly reported financial statements in order to conform to CECO's presentation.

Pro forma statement of income (loss) for the twelve months ended

December 27, 2014

	Three Months ended March 28, 2015(1)	Twelve months ended June 28, 2014(2)	Six months ended December 28, 2013(3)	Six months ended June 28, 2014(4)	Six months ended December 27, 2014(5)	Twelve months ended December 27, 2014(6)
(In thousands)						
Revenue	\$ 34,766	\$ 130,650	\$ 58,684	\$ 71,966	\$ 86,179	\$ 158,145
Cost of sales	26,185	94,754	40,849	53,905	58,548	112,453
Gross profit	8,581	35,896	17,835	18,061	27,631	45,692
Selling and administrative(7)	11,143	45,187	20,741	24,446	25,703	50,149
Acquisition expenses(7)		576		576		576
Amortization expenses(7)	145	742	330	412	375	787
Loss on impairment of intangibles and goodwill		26,631		26,631		26,631
Operating income (loss)	(2,707)	(37,240)	(3,236)	(34,004)	1,553	(32,451)
Other (expense) income, net	1,108	(687)	(369)	(318)	440	122
Interest expense	(674)	(1,668)	(706)	(962)	(817)	(1,779)
Income (loss) before taxes	(2,273)	(39,595)	(4,311)	(35,284)	1,176	(34,108)
Income tax benefit (expense)	(38)	1,277	(184)	1,461	(409)	1,052
Net income (loss)	\$ (2,311)	\$ (38,318)	\$ (4,495)	\$ (33,823)	\$ 767	\$ (33,056)
Less income (loss) attributable to non-controlling interest	62	66	100	(34)	201	167
NET INCOME (LOSS) ATTRIBUTABLE TO PMFG	\$ (2,373)	\$ (38,384)	\$ (4,595)	\$ (33,789)	\$ 566	\$ (33,223)
Per share data:						
Basic (loss) income per share	\$ (0.11)	\$ (1.82)	\$ (0.22)	\$ (1.60)	\$ 0.03	\$ (1.57)
Diluted (loss) income per share	\$ (0.11)	\$ (1.82)	\$ (0.22)	\$ (1.60)	\$ 0.03	\$ (1.57)
Weighted average number of common shares outstanding:						
Basic	21,301	21,086	21,089	21,086	21,250	21,166
Diluted	21,301	21,086	21,089	21,086	21,329	21,166

- (1) Derived from information included in the unaudited financial statements included in PMFG's Quarterly Report on Form 10-Q for March 28, 2015.
- (2) Derived from information included in the audited financial statements included in PMFG's Annual Report on Form 10-K.
- (3) Derived from information included in the unaudited financial statements included in PMFG's Quarterly Report on Form 10-Q for December 28, 2013.
- (4) Represents the mathematical difference between columns (2) and (3) with the exception of shares outstanding. Weighted average number of common shares outstanding was calculated using the weighted average number of shares outstanding for the six-month period ended June 28, 2014. Options and warrants outstanding during the period were excluded because they were anti-dilutive. Because of the net loss in the period options and warrants outstanding during the period had an anti-dilutive effect.
- (5) From unaudited financial statements included in Quarterly Report on Form 10-Q for December 27, 2014.
- (6) Equals columns (4) plus (5) with the exception of shares outstanding. Weighted average number of common shares outstanding was calculated using the weighted average number of shares outstanding for the 12-month period ended December 27, 2014. Options and warrants outstanding during the period were excluded because they were anti-dilutive.
- (7) Selling and administrative is obtained by aggregating (a) Sales and marketing, (b) Engineering and project management and (c) General and administrative from PMFG's historical consolidated statement of operations *minus* amounts shown separately in this pro forma statement of income (loss) for (x) Acquisition expenses and (y) Amortization expenses.

Table of Contents**SELECTED UNAUDITED PRO FORMA CONDENSED COMBINED FINANCIAL INFORMATION**

The unaudited pro forma condensed combined financial data of CECO provided below reflects the pro forma impact of the following:

the acquisition, on November 3, 2014, by CECO, through its subsidiary Fisher-Klosterman, Inc., of 100% of the membership interest of Emtrol LLC, a New York limited liability company (Emtrol), pursuant to a membership interest purchase agreement among CECO and each of the members of Emtrol;

the acquisition, on March 28, 2014, by PMFG, through its subsidiary Peerless Mfg. Co., of substantially all the assets of Combustion Components Associates, Inc., a Connecticut corporation (CCA), other than cash and the stock of a CCA subsidiary, pursuant to an asset purchase agreement among PMFG, CCA and the sole shareholder of CCA; and

the Mergers.

The unaudited pro forma condensed combined balance sheet gives effect to the Mergers as if the Mergers had occurred on March 31, 2015. The unaudited pro forma condensed combined statements of income assume that the transactions described above were consummated on January 1, 2014. The unaudited pro forma condensed combined financial statements are for illustrative purposes only and are not necessarily indicative of the financial results that would have occurred if the transactions described above had been consummated on the dates indicated, nor are they necessarily indicative of the financial position or results of operations in the future. The pro forma adjustments, as described in the accompanying notes to the unaudited pro forma financial information included elsewhere in this joint proxy statement/prospectus, are based upon available information and certain assumptions that are believed to be reasonable as of the date of this joint proxy statement/prospectus.

You should read the historical and pro forma financial data in conjunction with (a) CECO's Annual Report on Form 10-K for the year ended December 31, 2014, (b) CECO's Quarterly Report on Form 10-Q for the period ended March 31, 2015, (c) CECO's Current Report on Form 8-K/A filed with the SEC on January 20, 2015, (d) PMFG's Annual Report on Form 10-K for the year ended June 28, 2014, and (e) PMFG's Quarterly Reports on Form 10-Q for the periods ended December 28, 2013, December 27, 2014 and March 28, 2015. Please see *Where You Can Find More Information* beginning on page 223.

**Pro
forma as
of
and for
the
three months ended
March 31, 2015**

**Pro forma as of
and for the
year ended
December 31, 2014**

**(In thousands, except per share
data and current ratio)**

Selected Operating Statement Data

Net sales	\$ 115,751	\$ 457,214
Loss from operations	(434)	(19,128)
Net loss	(3,063)	(27,611)
Loss per share, basic	(0.09)	(0.83)
Loss per share, diluted	(0.09)	(0.82)

Other Financial Data

Cash dividends paid per share	0.051	0.176
Average common shares, basic	33,320	33,180
Average common shares, diluted	33,709	33,626

Selected Balance Sheet Data

Current assets	\$ 247,818	\$ 245,251
Current liabilities	155,000	149,922
Working capital	92,818	95,329
Current ratio	1.6	1.6
Total assets	648,982	652,758
Long-term obligations	238,583	242,368
Total stockholders' equity	255,399	260,468
Total capitalization	493,982	502,836

Table of Contents**COMPARATIVE PER SHARE MARKET PRICE, DIVIDEND AND OTHER DATA**

CECO common stock is listed and traded on NASDAQ under the symbol CECE. PMFG's common stock is listed and traded on NASDAQ under the symbol PMFG. The following table sets forth, for the calendar quarters indicated, the high and low sale price per share of CECO common stock and PMFG common stock, respectively, as reported on NASDAQ. On July 30, 2015, the last practicable trading day prior to the date of this joint proxy statement/prospectus, there were 26,442,164 shares of CECO common stock outstanding and 21,202,725 shares of PMFG common stock outstanding.

	CECO	
	High	Low
<i>For the fiscal quarter ended:</i>		
2013		
March 31, 2013	\$ 14.32	\$ 9.92
June 30, 2013	\$ 13.18	\$ 10.44
September 30, 2013	\$ 14.16	\$ 11.81
December 31, 2013	\$ 19.42	\$ 13.91
2014		
March 31, 2014	\$ 18.90	\$ 14.22
June 30, 2014	\$ 17.29	\$ 13.02
September 30, 2014	\$ 16.00	\$ 13.38
December 31, 2014	\$ 15.90	\$ 12.40
2015		
March 31, 2015	\$ 15.69	\$ 10.20
June 30, 2015	\$ 12.78	\$ 10.54
September 30, 2015 (through July 30)	\$ 11.48	\$ 8.65
	PMFG	
	High	Low
<i>For the fiscal quarter ended:</i>		
2013		
September 29, 2012	\$ 9.33	\$ 6.36
December 29, 2012	\$ 8.50	\$ 5.58
March 30, 2013	\$ 9.42	\$ 5.98
June 29, 2013	\$ 6.99	\$ 5.45
2014		
September 28, 2013	\$ 8.30	\$ 6.71
December 28, 2013	\$ 9.09	\$ 6.95
March 29, 2014	\$ 9.23	\$ 5.55
June 28, 2014	\$ 6.18	\$ 4.11
2015		
September 27, 2014	\$ 5.80	\$ 4.55
December 27, 2014	\$ 6.82	\$ 4.82
March 28, 2015	\$ 5.90	\$ 3.93

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June 27, 2015	\$ 6.75	\$ 4.25
2016		
September 26, 2015 (through July 30)	\$ 6.73	\$ 5.88

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The following table sets forth the closing sale price per share of PMFG common stock and CECO common stock as of May 1, 2015, the last trading day prior to the public announcement of the proposed Mergers, and as of July 30, 2015, the most recent practicable trading day prior to the date of this joint proxy statement/prospectus. The table also sets forth the implied value of the Merger Consideration proposed for each share of PMFG common stock as of the same two dates. This implied value was calculated by adding (a) 45% of the Cash Consideration and (b) 55% of the value obtained by multiplying the closing sale price of CECO common stock on the relevant date by the applicable Exchange Ratio, and assuming an aggregate of 45% Cash Consideration and 55% Stock Consideration. For purposes of determining the Exchange Ratio used in the table below, the closing price of CECO common stock on the relevant date was used.

	PMFG Common Stock	CECO Common Stock	Implied Value Per Share of PMFG Common Stock
May 1, 2015	\$ 4.62	\$ 11.79	\$ 6.85
July 30, 2015	6.18	9.23	6.36

The market value of the CECO common stock to be issued in exchange for shares of PMFG common stock upon the completion of the First Merger will not be known at the time of the PMFG Special Meeting. The above tables show only historical comparisons. Because the market prices of CECO common stock and PMFG common stock will likely fluctuate prior to the First Merger, these comparisons may not provide meaningful information to PMFG stockholders in determining whether to adopt the Merger Agreement. Stockholders are encouraged to obtain current market quotations for CECO common stock and PMFG common stock and to review carefully the other information contained in this joint proxy statement/prospectus or incorporated by reference in this joint proxy statement/prospectus. Please refer to *Where You Can Find More Information* beginning on page 223.

The value of the Stock Consideration PMFG stockholders will receive upon completion of the First Merger will depend on the market price of CECO common stock at the Effective Time. Accordingly, no assurance can be given as to the market price of CECO common stock or the market price of PMFG common stock at the Effective Time. Because the Exchange Ratio for the Stock Consideration is subject to minimum and maximum adjustments for changes in the market price of CECO common stock, the market value of the Stock Consideration at the Effective Time may vary significantly from the market value of the shares of CECO common stock that would have been issued in the First Merger if the First Merger had been consummated on the date of the Merger Agreement or on the date of this joint proxy statement/prospectus. The market price of CECO common stock will continue to fluctuate after the Effective Time. Please refer to *Risk Factors* beginning on page 39.

As a result of the proration procedures in the Merger Agreement, if a particular form of Merger Consideration is oversubscribed, then that election will be prorated. Please refer to *The Mergers Electing the Form of Merger Consideration* beginning on page 134.

The following table sets forth for the period presented certain per share information for CECO common stock and PMFG common stock on a historical basis and on an unaudited pro forma basis after giving effect to (a) the acquisition of Emtrol LLC on November 3, 2014, through its subsidiary Fisher-Klosterman, Inc., and (b) the Mergers, under the purchase method of accounting.

The unaudited pro forma PMFG equivalent information was calculated by multiplying the corresponding CECO unaudited pro forma combined information by 0.6097, which is the exchange ratio for the Stock Consideration in the pro forma condensed combined financial statements. It does not reflect the \$6.85 Cash Consideration that PMFG stockholders may elect to receive in the First Merger (subject to proration). Please refer to *The Mergers Electing the Form of Merger Consideration* beginning on page 134.

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You should read this information in conjunction with (a) the selected historical consolidated financial data included elsewhere in this joint proxy statement/prospectus, (b) the historical consolidated financial statements of CECO and PMFG and related notes are incorporated by reference into this joint proxy statement/prospectus and (c) the unaudited pro forma financial information and related notes included elsewhere in this joint proxy statement/prospectus. The unaudited pro forma per share information does not purport to represent what the actual results of operations of CECO and PMFG would have been had the Mergers been completed in another period or to project CECO's and PMFG's results of operations that may be achieved if the Mergers are completed.

	CECO	PMFG	CECO	PMFG
	Historical	Historical⁽¹⁾	Unaudited	Unaudited
For Year Ended December 31, 2014			Pro Forma	Pro Forma
			Combined	Equivalent
Net income (loss) per share (basic)	\$ 0.51	\$ (1.57)	\$ (0.83)	\$ (0.50)
Net income (loss) per share (diluted)	0.50	(1.57)	(0.82)	(0.49)
Cash dividends per share	0.23		0.23	0.14

(1) See *Adjusted Unaudited PMFG Information (To Account for Different Fiscal Year Ends)* on pages 56 and 57.

	CECO	PMFG	CECO	PMFG
	Historical	Historical⁽¹⁾	Unaudited	Unaudited
For Quarter Ended March 31, 2015 (unaudited)			Pro Forma	Pro Forma
			Combined	Equivalent
Net income (loss) per share (basic)	\$ 0.01	\$ (0.11)	\$ (0.09)	\$ (0.06)
Net income (loss) per share (diluted)	0.01	(0.11)	(0.09)	(0.05)
Book value per share at period end	6.79	4.13	7.58	4.56
Cash dividends per share	0.066		0.052	0.030

(1) Statement of income information for PMFG, Inc. is for the fiscal quarter ended March 28, 2015. CECO expects to continue to pay quarterly dividends during 2015 but only if and to the extent declared by the CECO Board and subject to various restrictions on CECO's ability to do so. Dividends on CECO's common stock are not cumulative.

Under the terms of the Merger Agreement, PMFG is prohibited from declaring dividends from the date of the Merger Agreement until its termination or the closing of the Mergers.

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THE CECO SPECIAL MEETING

This joint proxy statement/prospectus is being provided to CECO stockholders as part of a solicitation of proxies by the CECO Board for use at the CECO Special Meeting. This joint proxy statement/prospectus contains important information regarding the CECO Special Meeting, the proposals on which you are being asked to vote, information you may find useful in determining how to vote, and voting procedures.

This joint proxy statement/prospectus are being first mailed on or about August 4, 2015 to all stockholders entitled to vote at the CECO Special Meeting. Stockholders who owned shares of CECO common stock at the close of business on July 30, 2015, the record date for the CECO Special Meeting, are entitled to receive notice of, attend, and vote at the CECO Special Meeting. As of the close of business on the record date, there were 26,442,164 shares of CECO common stock outstanding.

Date, Time and Place

The special meeting of stockholders of CECO will be held on September 2, 2015 at 10:30 a.m., Eastern Time, at 4625 Red Bank Road, Suite 200, Cincinnati, Ohio 45227.

Purpose of the CECO Special Meeting

The special meeting will be held for the purpose of considering and acting upon the following matters:

the approval of the Share Issuance (**CECO Proposal No. 1**);

the approval of an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, as set forth in the Second Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan, a copy of which is attached to this joint proxy statement/prospectus as Annex D (**CECO Proposal No. 2**); and

the approval of the adjournment of the CECO Special Meeting, if necessary or appropriate (**CECO Proposal No. 3**).

The CECO Board, by unanimous vote, has determined that it is in the best interests of CECO and its stockholders to consummate the Mergers contemplated by the Merger Agreement, and unanimously recommends that stockholders vote FOR the proposal to approve the Share Issuance, FOR the proposal to approve an amendment to the Incentive Plan to increase from 2,600,000 to 3,300,000 the number of shares reserved for issuance under the Incentive Plan and FOR the proposal to approve the adjournment of the CECO Special Meeting, if necessary or appropriate.

Who Can Vote at the CECO Special Meeting

The CECO Board has fixed the close of business on July 30, 2015 as the record date for the determination of stockholders entitled to notice of and to vote at the CECO Special Meeting.

Only stockholders of record at the close of business on the record date July 30, 2015, are entitled to receive notice of the CECO Special Meeting and to vote the shares of common stock that they held on that date at the meeting, or any adjournment of the meeting.

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Vote Required for the Proposals

Each outstanding share of CECO's common stock entitles its holder to cast one vote on each matter to be voted upon at the CECO Special Meeting. The vote required to approve the Share Issuance, the amendment of the Incentive Plan to add 700,000 shares to the total number of shares reserved for issuance under the Incentive Plan and the adjournment of the CECO Special Meeting, if necessary or appropriate, is the approval of a majority of the votes present, in person or by proxy, and entitled to vote on the matter at the CECO Special Meeting.

Quorum Requirement

A quorum of stockholders is necessary to hold the CECO Special Meeting. The presence at the meeting, in person or by proxy, of the holders of a majority of the shares of common stock outstanding as of close of business on the record date for the CECO Special Meeting will constitute a quorum. As of July 30, 2015, the record date for the CECO Special Meeting, 26,442,164 shares of CECO's common stock were outstanding. Abstentions will be included in the calculation of the number of shares considered present at the meeting for purposes of establishing a quorum. In the event that a quorum is not present at the CECO Special Meeting, CECO expects that the CECO Special Meeting will be adjourned to solicit additional proxies.

Shares Owned by CECO Directors and Executive Officers

At the close of business on the record date for the CECO Special Meeting, directors and executive officers of CECO beneficially owned and were entitled to vote, in the aggregate, approximately 4,942,792 issued and outstanding shares of CECO common stock, representing approximately 18.7% of the shares of CECO common stock outstanding on that date. The directors and executive officers of CECO have informed CECO that they intend to vote all of the shares of CECO common stock they are entitled to vote (a) FOR the proposal to approve the Share Issuance, (b) FOR the proposal to approve an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, and (c) FOR the proposal to approve the adjournment of the CECO Special Meeting, if necessary or appropriate.

Voting Agreement

Icarus Investment Corp. and Jason DeZwirek entered into a Voting Agreement pursuant to which Icarus Investment Corp. and Mr. DeZwirek have each agreed to vote all shares of CECO common stock FOR the proposal to approve the Share Issuance. They also have granted PMFG a proxy to vote their respective shares in such manner. At the close of business on the record date for the CECO Special Meeting, they owned and were entitled to vote, in the aggregate, 3,936,506 shares of CECO common stock, which represented approximately 14.9% of the shares of the voting power of CECO common stock outstanding on that date.

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Methods of Voting Stockholders of Record This joint proxy statement/prospectus is being sent to CECO stockholders on behalf of the CECO Board for the purpose of requesting that you allow your shares of CECO common stock to be represented by the persons named in the enclosed proxy card. If you are a stockholder of record, you may vote by any of the following methods:

Internet. Electronically through the Internet by accessing www.voteproxy.com. To vote over the Internet, you should sign on to this website and follow the procedures described at the website. Internet voting is available 24 hours a day until September 1, and the procedures are designed to authenticate votes present by using a control number located on your proxy card. These procedures allow you to give a proxy to vote your shares and to confirm that your instructions have been properly recorded. If you vote over the Internet, you should not return your proxy card. If you vote over the Internet, your proxy will be voted as you direct on the website.

Telephone. By calling the telephone number included on the proxy card. Telephone voting is available 24 hours a day until September 1, and the procedures are designed to authenticate votes present by using a control number located on your proxy card. These procedures allow you to give a proxy to vote your shares and to confirm that your instructions have been properly recorded. If you vote by telephone, you should not return your proxy card.

Mail. By returning your proxy through the mail. If you complete and properly sign the accompanying proxy card and return it to CECO, it will be voted as you direct on the proxy card. You should follow the instructions set forth on the proxy card, being sure to complete it, to sign it and to mail it in the enclosed postage-paid envelope.

In Person. If your shares are registered directly in your name, you have the right to vote in person at the CECO Special Meeting. If you attend the CECO Special Meeting and plan to vote in person, CECO will provide you with a ballot at the CECO Special Meeting. If your shares are held in street name, you may vote in person at the CECO Special Meeting if you obtain a proxy.

CECO recommends that you vote in advance even if you plan to attend the meeting so that CECO will know as soon as possible that enough votes will be present for CECO to hold the meeting. If you are a stockholder of record and attend the meeting, you may vote at the meeting or deliver your completed proxy card in person.

Methods of Voting Beneficial Owners

If your shares are held in street name, please refer to the information forwarded to you by your bank, broker or other holder of record to see what you must do in order to vote your shares, including whether you may be able to vote electronically through your bank, broker or other record holder. If so, instructions regarding electronic voting will be provided by the bank, broker or other holder of record to you as part of the package that includes this joint proxy statement/prospectus.

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Failure to Provide Voting Instructions

Stockholders should specify their choice for each matter on the enclosed proxy. If no specific instructions are given, proxies that are signed and returned will be voted:

FOR the proposal to approve the Share Issuance;

FOR the proposal to approve an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance thereunder from 2,600,000 to 3,300,000, as set forth in the Second Amended and Restated CECO Environmental Corp. 2007 Equity Incentive Plan, a copy of which is attached to this joint proxy statement/prospectus as Annex D; and

FOR the proposal to approve the adjournment of the CECO Special Meeting, if necessary or appropriate.

If you grant a proxy, the persons named as proxy holders on the enclosed proxy card will vote your shares on any additional matters properly presented for a vote at the meeting as recommended by the CECO Board or, if no recommendation is given, in their own discretion.

Attending the Special Meeting

Stockholders eligible to vote at the CECO Special Meeting, or their duly authorized proxies, may attend the CECO Special Meeting. If you choose to attend the CECO Special Meeting, please bring photo identification. If you hold shares in street name (through a broker, bank, or other nominee) and wish to attend the CECO Special Meeting, you can vote at the CECO Special Meeting only if you have a valid proxy from your banker or broker confirming your beneficial ownership of shares of CECO common stock as of the record date and your authority to vote such shares.

Abstentions

If a stockholder abstains from voting on CECO Proposal Nos. 1, 2 or 3, it will have the same effect as a vote AGAINST that proposal. CECO believes that brokers, banks and other nominees do not have discretionary authority to vote on Proposal Nos. 1, 2 or 3 absent instructions from the beneficial owner.

Failure to Vote Shares

A failure to vote your shares pursuant to one of the methods described above will have no effect on Proposal No. 1, Proposal No. 2 or Proposal No. 3.

Revoking a Proxy

Even after you have submitted your proxy, you may change your vote at any time before the proxy is voted by:

delivering to CECO's Secretary at the address on the first page of this joint proxy statement/prospectus a written notice of revocation of your proxy over the Internet, by telephone or by mail;

delivering a duly executed proxy bearing a later date; or

voting in person at the CECO Special Meeting.

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Solicitation of Proxies

The solicitation of proxies from CECO stockholders is made on behalf of the CECO Board. CECO and PMFG will equally share the costs and expenses of printing and mailing this joint proxy statement/prospectus. CECO has retained Georgeson Inc. to assist in the solicitation of proxies. Solicitations may be made personally or by mail, facsimile, telephone, messenger or over the Internet. In addition to Georgeson's proxy solicitation fee of \$12,000 plus reasonable out-of-pocket expenses for this service, CECO will reimburse brokerage firms and other custodians for their reasonable out-of-pocket expenses for forwarding the proxy materials to stockholders. Directors, officers and employees of CECO may also solicit proxies in person, by telephone or by other means of communication. Directors, officers and employees of CECO will not be paid any additional compensation for soliciting proxies.

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CECO PROPOSAL NO. 1:

APPROVAL OF THE SHARE ISSUANCE

The Share Issuance of CECO common stock to PMFG stockholders pursuant to the Merger Agreement and the First Merger is subject to approval by CECO's stockholders as required by applicable rules of NASDAQ. If the Share Issuance is approved by CECO's stockholders and the conditions to completing the First Merger as set forth in the Merger Agreement are satisfied or waived, each issued and outstanding share of PMFG common stock will be converted into the right to receive either (a) the Cash Consideration of \$6.85 without interest, or (b) the Stock Consideration in shares of CECO common stock valued at \$6.85 based on the volume weighted average trading price for the 15-trading day period ending on the last trading day before the closing of the First Merger, subject to a collar so that there will be a maximum Exchange Ratio of 0.6456 share of CECO common stock for each share of PMFG common stock and a minimum Exchange Ratio of 0.5282 share of CECO common stock for each share of PMFG common stock. Elections are subject to proration so that 45% of the aggregate consideration that will be paid by CECO will be paid in cash. In addition, PMFG Options and PMFG RSUs will be settled for approximately \$1.6 million in cash from the \$66.2 million (or approximately 45%) of the aggregate consideration paid in cash. The remaining approximately 55% of the aggregate consideration will be paid in shares of CECO common stock. For a detailed discussion of the terms and conditions of the Mergers, see *The Mergers* beginning on page 83.

Under NASDAQ Listing Rules, a company listed on NASDAQ is required to obtain stockholder approval for an acquisition of stock of another company if the present or potential issuance of common stock, other than a public offering for cash, may equal or exceed 20% of the voting power or the total shares outstanding on a pre-transaction basis. If the First Merger is completed, CECO will issue a maximum of 7,630,000 shares of CECO common stock in connection with the First Merger. The aggregate number of shares of CECO common stock to be issued in the First Merger will exceed 20% of the shares of CECO common stock outstanding before such issuance and for this reason CECO must obtain the approval of CECO stockholders for the Share Issuance. CECO is asking its stockholders to approve the Share Issuance. The Share Issuance and the approval of the Share Issuance proposal is required for the completion of the First Merger.

CECO Board Recommendation and Required Stockholder Vote

The CECO Board recommends a vote FOR the Share Issuance (CECO Proposal No. 1 on the accompanying proxy card). The affirmative vote of a majority of the votes present and entitled to vote at the meeting at which a quorum is present is required for the approval of the Share Issuance.

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CECO PROPOSAL NO. 2:

APPROVAL OF THE INCREASE IN SHARES AUTHORIZED FOR ISSUANCE

UNDER THE INCENTIVE PLAN

The following section sets forth the principal terms of the Incentive Plan, the form of which is attached to this joint proxy statement/prospectus as Annex D and is incorporated by reference herein. The rights and obligations of CECO and participants in the Incentive Plan are governed by the express terms and conditions of the Incentive Plan and not by this section, which is summary by nature. This section is not complete and is qualified in its entirety by reference to the complete text of the Incentive Plan. You are encouraged to read the Incentive Plan carefully in its entirety, as well as this joint proxy statement/prospectus, before making any decisions regarding your vote.

General

The Incentive Plan was ratified by the CECO Board on April 12, 2007 and approved by CECO's stockholders on May 23, 2007. An amendment to the Incentive Plan was approved by CECO's stockholders on May 21, 2009 to permit the CECO Board to reprice options without further stockholder approval. CECO's Compensation Committee and the CECO Board believes that the growth of CECO depends significantly upon the efforts of its key employees and directors and that such individuals are best motivated to put forth maximum effort on behalf of CECO if they own an equity interest in CECO. The purpose of the Incentive Plan is to (a) attract and retain employees of CECO and its subsidiaries, qualified individuals to serve as non-employee members of the CECO Board, and consultants to provide services to CECO; (b) motivate participating employees, directors and consultants, by means of appropriate incentives, to achieve long-range goals; and (c) provide incentive compensation opportunities that are competitive with those of other similarly situated companies; and thereby promote the long-term financial interest of CECO and its subsidiaries, including the growth in value of CECO's equity and enhancement of long-term stockholder return. Another amendment to the Incentive Plan was approved by CECO's stockholders on August 26, 2013 to increase the total number of shares of CECO common stock available for issuance thereunder from 2,000,000 to 2,600,000.

Proposed Amendment

CECO is asking its stockholders to approve an amendment of the Incentive Plan to add 700,000 shares to the total number of shares reserved for issuance under the Incentive Plan and thereby increase the total number of shares available for issuance from 2,600,000 to 3,300,000. On June 2, 2015, CECO's Compensation Committee recommended to the CECO Board for approval and on June 7, 2015 the CECO Board approved the amendment to the Incentive Plan to increase the shares reserved for issuance thereunder by 700,000 shares, subject to the approval from CECO's stockholders at the CECO Special Meeting and the closing of the First Merger. Because CECO will be issuing a significant amount of additional shares and will have additional employees in connection with the First Merger, CECO's Compensation Committee and the CECO Board believe it is appropriate and advisable to increase the number of shares available for issuance under the Incentive Plan. As of July 30, 2015, there were a total of 1,756,229 shares subject to outstanding options under the Incentive Plan and there were 270,651 remaining shares reserved for issuance under the Incentive Plan, and the CECO Board believes that it is essential to have sufficient reserved shares available under the Incentive Plan to compensate and incentivize its employees, directors, and consultants. CECO's Compensation Committee and the CECO Board believes that the proposed increase to the number of available shares to be granted under the Incentive Plan will provide sufficient number of shares of common stock and options for near future granting needs and will help CECO achieve the purposes of the Incentive Plan set forth above.

A copy of the Incentive Plan incorporating the proposed amendment to be approved by CECO's stockholders is attached to this joint proxy statement/prospectus as Annex D. The only change to the Incentive Plan is the proposed addition of 700,000 shares to the total number of shares reserved for issuance under the Incentive Plan.

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The classes of persons who will be eligible to participate in, and the basis of their participation in, the Incentive Plan are described below in *Summary of the 2007 Equity Incentive Plan*. CECO's executive officers have an interest in this proposal as they have or may in the future receive awards under the Incentive Plan.

Summary of the Incentive Plan

The Incentive Plan authorizes the issuance of options to purchase shares of CECO common stock and the grant of bonus stock awards and restricted common stock awards. Set forth below is a summary of the material terms of the Incentive Plan. The statements contained in the summary are intended only to summarize the Incentive Plan and are qualified in their entirety by reference to the Incentive Plan itself. For a more complete description of the terms of the Incentive Plan, you should read a copy of the Incentive Plan which is attached to this joint proxy statement/prospectus as Annex D.

Administration

Administration of the Incentive Plan has been delegated to CECO's Compensation Committee. The Compensation Committee shall consist solely of two (2) or more independent, non-employee directors, as defined in Rule 16b-3 promulgated under the Exchange Act who are outside directors within the meaning of Section 162(m).

Eligibility

All of CECO's employees, including those of CECO's subsidiaries and those of CECO's affiliates, are eligible to participate in the Incentive Plan. CECO's Directors and other persons that provide consulting services to CECO, CECO's subsidiaries and CECO's affiliates are also eligible to participate in the Incentive Plan. The term affiliates is used in this summary to refer to any person or entity that directly or indirectly controls, or is controlled by or is under common control with CECO. The term subsidiary is used in this summary to refer to any corporation or other corporate entity (other than CECO) in an unbroken chain of corporate entities beginning with CECO if each of the corporations or other corporate entity (other than the last corporation in the unbroken chain) owns stock possessing at least 50% of the total combined voting power of all classes of stock in one of the other corporations in such chain.

Maximum Shares and Award Limits

As of July 30, 2015, CECO has reserved 3,300,000 (including the 700,000 shares subject to stockholder approval and the closing of the First Merger) shares of common stock for issuance under the Incentive Plan. As of July 30, 2015, 270,651 of such shares were available for future grant, not including the 700,000 proposed additional shares. There is no provision for automatically increasing the number of shares of common stock allocated to the Incentive Plan without further approval by the stockholders. The terms of outstanding awards will be adjusted without the approval of CECO's stockholders as CECO's Compensation Committee determines is appropriate in the event of a stock dividend, stock split, reclassification of stock, merger, reorganization or similar event. If an option terminates, expires or becomes un-exercisable, or shares of common stock subject to a stock award are forfeited, the shares subject to such option or stock award are available under the first sentence of this paragraph for future awards under the Incentive Plan.

Table of Contents***Stock Options***

The Incentive Plan provides for the grant of both options intended to qualify as incentive stock options under Section 422 of the Code and options not intended to so qualify. Options intended to qualify as incentive stock options may be granted only to persons who are employees or employees of subsidiaries that are treated as corporations for federal income tax purposes. No participant may be granted incentive stock options that are exercisable for the first time in any calendar year for common stock having a total fair market value (determined as of the option grant) in excess of \$100,000. CECO's Compensation Committee will select the participants who are granted options and, consistent with the terms of the Incentive Plan, will prescribe the terms of each option, including the vesting rules for such option. The option exercise price for options cannot be less than the common stock's fair market value on the date the option is granted, and in the event a grant of an option intended to be an incentive stock option to a participant is deemed to be a 10% owner of CECO or one of CECO's subsidiaries, the exercise price of an incentive stock option cannot be less than 110% of the common stock's fair market value on the date the option is granted. Generally, the option price must be paid in cash, however, if approved by CECO's Compensation Committee, a cashless exercise will be permitted. Options may be exercised in accordance with requirements set by CECO's Compensation Committee. The maximum period in which an option may be exercised will be fixed by the Committee, provided that (a) in order for options to qualify as incentive stock options, the maximum period cannot exceed ten years and (b) in the event a participant is deemed to be a 10% owner of CECO or a subsidiary, the maximum period for an incentive stock option granted to such participant cannot exceed five years. Options will be nontransferable except in the event of the participant's death.

Unless provided otherwise in a participant's stock option agreement and subject to the maximum exercise period for the option, an option generally will cease to be exercisable upon the earlier of three months following the participant's termination of service with CECO or CECO's affiliate or the expiration date under the terms of the participant's stock option agreement. The right to exercise an option will expire immediately upon the participant's termination of service with CECO if the termination is for cause. Upon death or disability, the option exercise period is extended to the earlier of one year from the participant's termination of service or the expiration date under the terms of the participant's stock option agreement.

Stock Awards

CECO's Compensation Committee also will select the participants who are granted bonus or restricted common stock awards and, consistent with the terms of the Incentive Plan, will establish the terms of each bonus or restricted common stock award. A bonus or restricted common stock award may be subject to payment by the participant of a purchase price for the shares of common stock subject to the award, and may be subject to vesting requirements or transfer restrictions or both, if so provided by CECO's Compensation Committee. Those requirements may include, for example, a requirement that the participant complete a specified period of employment with CECO or its affiliate or the achievement of certain performance objectives. Any such performance objectives may be based on the individual performance of the participant, CECO's performance or the performance of CECO's affiliates, subsidiaries, divisions, departments or functions in which the participant is employed or has responsibility. A transfer of the shares of common stock subject to a restricted common stock award normally will be restricted prior to vesting.

Change in Capitalization

The number of shares of common stock covered by outstanding awards, the number or kind of shares of common stock which may be awarded under the Incentive Plan, and the exercise or purchase price of each outstanding award, and the like, shall be proportionally adjusted by the Compensation Committee in the event of a stock dividend, stock split, reclassification of stock, merger, reorganization or similar event. Such adjustment may not materially change the

value of benefits available to a grantee under a previously granted award.

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Merger, Consolidation or Asset Sale

If CECO is merged or consolidated with another entity or sells or otherwise disposes of substantially all of its assets to another company, or other change of control, then the vesting of all or part of an outstanding option or stock award may be accelerated in the sole discretion of the CECO Board. Completion of the Mergers will not trigger accelerated vesting under the Incentive Plan.

Amendment and Termination

No awards may be granted under the Incentive Plan after April 12, 2017, which is the tenth anniversary of the date on which the Incentive Plan was initially adopted by the CECO Board. The CECO Board may amend or terminate the Incentive Plan at any time, but an amendment will not become effective without the approval of CECO's stockholders if stockholder approval is required by any applicable law, regulation or rule, including any rule of NASDAQ; provided, however, the CECO Board may effect a repricing of options without stockholder consent. No amendment or termination shall, without a participant's consent, adversely affect any rights of such participant under any award outstanding at the time such amendment is made; provided, however, that the CECO Board, in the event of a change of control, may replace the awards with substantially similar awards under another plan of another party to the change of control, make a payment to all participants with respect to options equal to the difference between the fair market value of the common stock on the date of the change of control and the exercise price per share of an option on the date of grant, or upon not less than seven days written notice to all holders of options, cause all options to terminate immediately prior to the effective time of the change of control during which seven day period the holders may exercise their vested options, and if the CECO Board elects, accelerate the vesting of any or all options not then vested.

Federal Income Tax Aspects of the Incentive Plan

The following is a brief summary of the federal income tax aspects of awards that may be made under the Incentive Plan based on existing U.S. federal income tax laws. This summary provides only the basic tax rules. It does not describe a number of special tax rules, including the alternative minimum tax and various elections that may be applicable under certain circumstances. The tax consequences of awards under the Incentive Plan depend upon the type of award and, if the award is to an executive officer, whether the award qualifies as performance-based compensation under Section 162(m) of the Code.

Incentive Stock Options

The recipient of an incentive stock option generally will not be taxed upon grant of the option. Federal income taxes are generally imposed only when the shares of stock from exercised incentive stock options are disposed of, by sale or otherwise. The amount by which the fair market value of the stock on the date of exercise exceeds the exercise price is, however, included in determining the option recipient's liability for the alternative minimum tax. If the incentive stock option recipient does not sell or dispose of the stock until the later of more than one year after the receipt of the stock and two years after the option was granted, then, upon sale or disposition of the stock, the difference between the exercise price and the market value of the stock as of the date of exercise will be treated as a capital gain, and not ordinary income. If a recipient fails to hold the stock for the minimum required time, at the time of the disposition of the stock, the recipient will recognize ordinary income in the year of disposition in an amount equal to any excess of the market value of the common stock on the date of exercise (or, if less, the amount realized on disposition of the shares) over the exercise price paid for the shares. Any further gain (or loss) realized by the recipient generally will be taxed as short-term or long-term capital gain (or loss) depending on the holding period. CECO will not receive a tax deduction for incentive stock options which are taxed to a recipient as capital gains; however, CECO will receive a tax

deduction if the sale of the stock does not qualify for capital gains tax treatment.

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Nonqualified Stock Options

The recipient of stock options not qualifying as incentive stock options generally will not be taxed upon the grant of the option, provided that the option is granted with an exercise price no less than the fair market value of the stock on the date of grant. Federal income taxes are generally due from a recipient of nonqualified stock options when the stock options are exercised. The difference between the exercise price of the option and the fair market value of the stock purchased on such date is taxed as ordinary income. Thereafter, the tax basis for the acquired stock is equal to the amount paid for the stock plus the amount of ordinary income recognized by the recipient. CECO will be entitled to a tax deduction equal to the amount of ordinary income realized by the option recipient by reason of the exercise of the option.

Other Awards

The payment of other awards under the Incentive Plan will generally be treated as ordinary compensation income at the time of payment or, in the case of bonus or restricted common stock subject to a vesting requirement, at the time substantial vesting occurs. A recipient who receives bonus or restricted shares which are not substantially vested, may, within 30 days of the date the shares are transferred, elect in accordance with Section 83(b) of the Code to recognize ordinary compensation income at the time of transfer of the shares. The amount of ordinary compensation income is equal to the amount of any cash and the amount by which the then fair market value of any common stock received by the participant exceeds the purchase price, if any, paid by the participant. Subject to the application of Section 162(m), CECO will receive a tax deduction for the amount of the compensation income.

Information Regarding Incentive Plan Benefits

The awards that will be granted to eligible employees, directors and consultants under the Incentive Plan will be at the discretion of the Compensation Committee and, therefore, are not determinable at this time. Information regarding awards granted to CECO's named executive officers and directors under the plans in place during the year ended December 31, 2014 may be found under the captions Executive Compensation Director Compensation, Executive Compensation 2014 Summary Compensation Table in CECO's proxy statement for CECO's 2015 annual meeting of stockholders filed with the SEC on April 10, 2015.

Table of Contents**Securities Authorized for Issuance under Equity Compensation Plans**

The following table sets forth, as of the end of CECO's most recently completed fiscal year, information regarding securities authorized for issuance under equity compensation plans.

Equity Compensation Plan Information

Plan Category	December 31, 2014		
	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights	(b) Weighted-average exercise price of outstanding options, warrants and rights compensation plans	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by security holders			
1997 Stock Option Plan ¹	80,000	\$ 12.03	
Incentive Plan ²	1,653,444	\$ 10.02	308,651
Employee Stock Purchase Plan ³	3,969	\$ 13.21	1,438,079
Equity compensation plans not approved by security holders			
TOTAL	1,737,410	\$ 10.12	1,746,730

- 1 The 1997 Stock Option Plan (the "1997 Plan") was replaced with the Incentive Plan. The 1997 Plan remains in effect solely for the purpose of the continued administration of the options currently outstanding under the 1997 Plan.
- 2 The Incentive Plan was approved by the stockholders on May 23, 2007. At a special meeting of CECO stockholders held on August 26, 2013, CECO stockholders approved an amendment to the Incentive Plan to increase the number of shares of common stock available for issuance by 600,000 shares. In 2014, 285,777 options and restricted stock awards were granted to plan participants under the Incentive Plan.
- 3 The Employee Stock Purchase Plan was approved by the stockholders on May 21, 2009.

Amendment of Incentive Plan Contingent on Approval and Closing of First Merger

The CECO Board has made the proposed amendment of the Incentive Plan to add 700,000 shares to the total number of shares reserved for issuance under the Incentive Plan contingent upon closing of the First Merger. If the First Merger is not completed, then the proposed amendment of the Incentive Plan will not be implemented, even if approved by CECO's stockholders.

CECO Board Recommendation and Required Stockholder Vote

The CECO Board unanimously recommends a vote FOR the proposal to approve an amendment to the Incentive Plan to increase the number of shares of common stock reserved for issuance thereunder from 2,600,000 to 3,300,000, with the addition of 700,000 shares to the total number of shares reserved for issuance under the Incentive Plan (CECO Proposal No. 2). The affirmative vote of a majority of the votes present in person or by proxy and entitled to vote at the meeting at which a quorum is present is required for the approval of the amendment o