

May 2, 2011

VIA FACSIMILE

Jim McCann
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: EMCORE Corporation
Preliminary Proxy Statement
Filed April 22, 2011
File No. 000-22175

Dear Mr. McCann:

EMCORE Corporation (the "Company") respectively submits the following responses to a telephone conversation on April 29, 2011 with the staff of the United States Securities and Exchange Commission (the "Staff") regarding the Company's Preliminary Proxy Statement relating to the Company's annual meeting of shareholders to be held on June 14, 2011 (the "Preliminary Proxy"). Unless otherwise indicated, capitalized terms used below have the meanings assigned to them in the Preliminary Proxy.

- 1. Regarding the proposal for a possible reverse stock split of the Company's common stock in the range from 2:1 to 10:1 (the "Proposal"), please supplement the disclosure regarding the Company's rationale for the reverse stock split.***

RESPONSE:

In response, we have provided additional disclosure regarding the reasons for the reverse stock split. We have attached a marked copy of the Proposal to this letter as Exhibit A, which includes the additional disclosure.

- 2. In respect of the Proposal, please address the factors the board of directors of the Company would consider when determining which ratio it will select within the range to be approved by the shareholders if it decides to implement the reverse stock split.***

RESPONSE:

In response, we have provided disclosure regarding the factors our board of directors would consider when determining which ratio it will select. We have attached a marked copy of the Proposal to this letter as Exhibit A, which includes this disclosure.

* * *

In connection with responding to your comments and with this submission, we hereby acknowledge that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and,
- the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities law of the United States.

We believe the responses above fully address the comments contained in your letter. Please call our outside counsel, Tobias Knapp of Jenner & Block, LLP, at (212) 891-1655 if you have any questions regarding the above responses.

Sincerely,

/s/ Alfredo Gomez

Alfredo Gomez
General Counsel and Secretary
EMCORE Corporation

EXHIBIT A

PROPOSAL III: APPROVAL OF A POSSIBLE REVERSE STOCK SPLIT IN THE RANGE FROM 2:1 TO 10:1, IN THE DISCRETION OF OUR BOARD OF DIRECTORS

Overview

The shareholders are being asked to approve a possible reverse stock split of our outstanding Common Stock in the range of from 2:1 to 10:1 (or more plainly stated, the range would be as low as from two existing shares to be exchanged for one new share, to as high as ten existing shares to be exchanged for one new share), as determined in the sole discretion of the Board of Directors. The Board of Directors has adopted a resolution (i) declaring the advisability of a possible reverse stock split in the range of 2:1 to 10:1, and a corresponding reduction in the number of authorized shares of the Company's Common Stock, subject to shareholder approval, (ii) in connection therewith, approving a form of amendment to our Restated Certificate of Incorporation to effect such a reverse stock split, subject to shareholder approval, and (iii) authorizing any other action the Board of Directors deems necessary to effect such a reverse stock split, without further approval or authorization of the Company's shareholders. If the proposed reverse stock split is approved, our Board of Directors would have the discretion to elect, as it determines to be in the best interests of the Company and its shareholders, to effect the reverse stock split at any exchange ratio within the range at any time before the date of our next annual meeting of shareholders. The Board of Directors may elect not to implement the approved reverse stock split at its sole discretion. The Board of Directors believes that approval of a proposal granting this discretion to the Board of Directors provides the Board of Directors with appropriate flexibility to achieve the purposes of the reverse stock split, if implemented, and to act in the best interests of the Company and its shareholders. The amendment to the Restated Certificate of Incorporation is attached as Exhibit A to this Proxy Statement.

The Purpose for Which the Board of Directors Would Effect the Reverse Stock Split

^AThe Board of Directors believes that it is in the best interests of our shareholders for the Board of Directors to obtain the authority to implement a reverse stock split. In determining the advisability of a reverse stock split, the Board of Directors considered the following anticipated benefits:

- : increasing institutional investor interest in and ownership of our Common Stock;
- : increasing investors' visibility into our profitability on a per share basis; and
- : improving our ability to maintain long-term compliance with the listing requirements of Nasdaq, including continued compliance with Nasdaq's \$1.00 minimum bid price requirement.

The Board of Directors believes that the reverse stock split, if completed, could make our Common Stock more attractive to a broader range of institutional and other investors. Many brokerage houses and institutional investors have adopted internal policies and practices that either prohibit or discourage them from investing in low-priced stocks or recommending such stocks to their customers because of the trading volatility often associated with such stocks. The processing of trades in low-priced stocks may be economically unattractive to brokers and their customers because brokers' commissions on transactions are often based on the number of shares subject to the transaction and in low-priced stocks generally represent a higher percentage of the stock price than commissions on higher priced stocks. Moreover, the analysts at many brokerage firms do not monitor the trading activity or otherwise provide research coverage on low-priced stocks. The combination of lower transaction costs and increased interest from institutional investors and analysts could ultimately improve the trading liquidity of our Common Stock.

The Board of Directors believes that a decrease in our outstanding shares of Common Stock would result in increased visibility for our net earnings (loss) per share. For example, if our weighted average number of shares of Common Stock outstanding was 100 million, each \$1.0 million of net income would result in \$0.01 of earnings per share and net income of less than \$0.5 million would result in no earnings per share as a result of rounding. If we implemented the reverse stock split using a ratio of 5:1 and reduced the weighted average number of shares outstanding to 20 million, each \$200,000 of net income would result in \$0.01 earnings per share and any change in net income of greater than \$100,000 would be visible in earnings per share, making it easier to reflect changes in our quarterly and annual results of operations, whether up or down, in our earnings (loss) per share calculations.

In addition, the reverse stock split is intended to help avoid any future non-compliance with Nasdaq's \$1.00 minimum bid price requirement. We have in the past received notices of non-compliance with this listing requirement, and the Board of Directors believes that it would be advisable to implement a reverse stock split in order to help reduce the risk of such non-compliance in the future.

Board Discretion to Implement the Reverse Stock Split

The Board of Directors believes that shareholder approval of a range of potential exchange ratios (rather than a single exchange ratio) is in the best interests of our shareholders because it provides the Board of Directors with the flexibility to achieve the desired results of the reverse stock split and because it is not possible to predict market conditions at the time the reverse stock split would be implemented. If the shareholders approve this proposal, the Board of Directors would carry out a reverse stock split only upon the Board of Directors' determination that a reverse stock split would be in the best interests of the shareholders at that time. The Board of Directors would then set the ratio for the reverse stock split in an amount it determines is advisable and in the best interests of the shareholders considering relevant market conditions at the time the reverse stock split is to be implemented. In determining the ratio, following receipt of shareholder approval, the Board of Directors may consider, among other things:

- : the historical prices and trading volume of our Common Stock;
- : the then-prevailing trading price and trading volume of our Common Stock and the anticipated impact of the reverse stock split on the trading market for our Common Stock;
- : the outlook for the trading price of our Common Stock;
- : the historic and then-prevailing prices of our competitors' common stock;
- : any threshold prices of brokerage houses or institutional investors which could impact their ability to invest or recommend investments in our Common Stock;
- : our ability to maintain compliance with the then-current listing requirements of Nasdaq; and

- : prevailing general market and economic conditions.

The Board of Directors intends to select a reverse stock split ratio that it believes would be most likely to achieve the anticipated benefits of a reverse stock split described above.

To accomplish the reverse stock split, we would file an amendment to the Restated Certificate of Incorporation with the New Jersey Secretary of State. The form of amendment to the Restated Certificate of Incorporation to accomplish the proposed reverse stock split is attached as Exhibit A to this Proxy Statement. The text of the amendment to the Restated Certificate of Incorporation is subject to modification to include such changes as the Board of Directors deems necessary and advisable to effect the reverse stock split, including the applicable ratio for the reverse stock split. If the Board of Directors elects to implement the reverse stock split, the number of issued and outstanding shares of our Common Stock would be reduced in accordance with the selected exchange ratio for the reverse stock split, and the number of authorized shares of the Common Stock would also be reduced in the same proportion. The number of authorized shares of Preferred Stock would remain unchanged. The reverse stock split would become effective upon filing the amendment to the Restated Certificate of Incorporation with the New Jersey Secretary of State. No further action on the part of shareholders would be required to either effect or abandon the reverse stock split. If the Board of Directors does not implement the reverse stock split prior to the date of our next annual meeting of shareholders, the authority granted in this proposal to implement the reverse stock split will terminate. The Board of Directors reserves its right to elect not to proceed and abandon the reverse stock split if it determines, in its sole discretion, that this proposal is no longer in the best interests of our shareholders.

Potential Effects of the Proposed Reverse Stock Split

The immediate effect of the reverse stock split would be to reduce the number of shares of the outstanding Common Stock and to increase the trading price of such Common Stock. However, the effect of any consummated reverse stock split upon the market price of the Common Stock cannot be predicted, and the history of reverse stock splits for companies in similar circumstances is that sometimes stock performance improves, but in many cases it does not. There can be no assurance that the trading price of the Common Stock after the reverse stock split will rise in proportion to the reduction in the number of shares of our Common Stock outstanding as a result of the reverse stock split or remain at an increased level for any period. Also, there is no assurance that a reverse stock split would not eventually lead to a decrease in the trading price of the Common Stock, that the trading price would remain above the thresholds required by the Nasdaq listing rules or that we will be able to continue to meet the other continued listing requirements of Nasdaq. The trading price of the Common Stock may change due to a variety of other factors, including our operating results, other factors related to our business and general market conditions. In addition, the liquidity of our Common Stock could be adversely affected by the reduced number of shares that would be issued and outstanding if the reverse stock split is effectuated.

Effects on Ownership by Individual Shareholders

If we implement the reverse stock split, the number of shares of our Common Stock held by each shareholder would be reduced by multiplying the number of shares held immediately before the reverse stock split by the selected exchange ratio, and then rounding up to the nearest whole share. The reverse stock split would not affect any shareholder's percentage ownership interest in the Company or proportionate voting power, except to the extent that interest in a fractional share would be rounded up to the nearest whole share.

Effect on Options, Warrants and Other Securities

In addition, all outstanding options, warrants and other securities entitling their holders to purchase shares of our Common Stock would be adjusted as a result of the reverse stock split, as required by the terms of these securities. In particular, proportionate adjustments will be made to the exercise price per share and the number of shares issuable upon the exercise of all outstanding options, entitling the holders to purchase shares of our Common Stock, which will result in approximately the same aggregate price being required to be paid for such options upon exercise immediately preceding the reverse stock split. Also, the number of shares reserved for issuance under any existing employee stock option plans would be reduced proportionally based on the selected exchange ratio of the reverse stock split. Our preferred stock would not be affected by the proposed reverse stock split.

Other Effects on Outstanding Shares

If the reverse stock split were implemented, the rights and preferences of the outstanding shares of the Common Stock would remain the same after the reverse stock split. Each share of Common Stock issued pursuant to the reverse stock split would be fully paid and non-assessable. The reverse stock split would result in some shareholders owning "odd-lots" of less than 100 shares of Common Stock. Brokerage commissions and other costs of transactions in odd-lots are generally higher than the costs of transactions in "round-lots" of even multiples of 100 shares.

Effect on Authorized Shares of Common Stock

The reverse stock split, if implemented, would reduce the number of authorized shares of Common Stock in the same proportion as the selected exchange ratio for the reverse stock split (not accounting for any rounding of fractional shares as described below).

Procedure for Implementing the Proposed Reverse Stock Split and Exchange of Stock Certificates

If shareholders approve the proposed amendment to the Restated Certificate of Incorporation, the Board of Directors may elect whether or not to declare a reverse stock split at any time before our next annual meeting of shareholders. The reverse stock split would be implemented by filing the amendment to the Restated Certificate of Incorporation with the New Jersey Secretary of State, and the reverse stock split would become effective on the date the filing is accepted by the Secretary of State. As of the effective date of the reverse stock split, each certificate representing shares of our Common Stock before the reverse stock split would be deemed, for all corporate purposes, to evidence ownership of the reduced number of shares of our Common Stock resulting from the reverse stock split, except that holders who have not exchanged their certificates would not be entitled to receive any dividends or other distributions payable by us after the effective date until they surrender their old stock certificates for exchange. All shares, underlying options and warrants and other securities would also be automatically adjusted on the effective date. If we elect to exchange share certificates, our transfer agent would act as the exchange agent for purposes of implementing the exchange of stock certificates. In such event, as soon as practicable after the effective date, shareholders and holders of securities convertible into our Common Stock would be notified of the effectiveness of the reverse stock split. Shareholders of record would receive a letter of transmittal requesting them to surrender their stock certificates for stock certificates reflecting the adjusted number of shares as a result of the reverse stock split. Persons who hold their shares in brokerage accounts or "street name" would not be required to take any further actions to effect the exchange of their certificates. No new certificates would be issued to a shareholder until such shareholder has surrendered the outstanding certificate(s) together with the properly completed and executed letter of transmittal to the exchange agent. Until surrender, each certificate representing shares before the reverse stock split would continue to be valid and would represent the adjusted number of shares based on the exchange ratio of the reverse stock split, rounded up to the nearest whole share. Shareholders should not destroy any stock certificate and should not submit any certificates until they receive a letter of transmittal.

Accounting Consequences

The no par value per share of our Common Stock would remain unchanged after the reverse stock split. The per share Common Stock net income or loss and net book value will be increased for current and comparative prior periods because there will be fewer shares of the Common Stock outstanding. We do not anticipate that any other accounting consequences would arise as a result of the reverse stock split.

Fractional Shares

We will not issue fractional shares in connection with the reverse stock split. In order to avoid the expense and inconvenience of issuing and transferring fractional shares of our Common Stock to shareholders who would otherwise be entitled to receive fractional shares of Common Stock following the reverse stock split, any fractional shares which result from the reverse stock split will be rounded up to the next whole share.

No Appraisal Rights

Under the New Jersey Business Corporation Act, shareholders are not entitled to appraisal rights with respect to the proposed amendment to the Restated Certificate of Incorporation to effect the reverse stock split.

United States Federal Income Tax Consequences of the Reverse Stock Split

The following is a summary of important U.S. tax considerations of the reverse stock split. It addresses only shareholders who hold the pre-reverse stock split shares and post-reverse stock split shares as capital assets. It does not purport to be complete and does not address shareholders subject to special rules, such as financial institutions, tax-exempt organizations, insurance companies, dealers in securities, mutual funds, foreign shareholders, shareholders who hold the pre-reverse stock split shares as part of a straddle, hedge, or conversion transaction, shareholders who are subject to the alternative minimum tax provisions of the Internal Revenue Code of 1986, as amended (the "Code"), and shareholders who acquired their pre-reverse stock split shares pursuant to the exercise of employee stock options or otherwise as compensation. This summary is based upon current law, which may change, possibly even retroactively. It does not address tax considerations under state, local, foreign, and other laws. Furthermore, we have not obtained a ruling from the Internal Revenue Service or an opinion of legal or tax counsel with respect to the consequences of the reverse stock split. **Each shareholder is advised to consult a qualified tax advisor.**

The proposed reverse stock split is intended to be treated as a "reorganization" within the meaning of Section 368 of the Code. Assuming the reverse stock split qualifies as a reorganization, a shareholder generally will not recognize gain or loss on the reverse stock split. The aggregate tax basis of the post-reverse stock split shares received will be equal to the aggregate tax basis of the pre-reverse stock split shares exchanged therefor (excluding any portion of the holder's basis allocated to fractional shares), and the holding period of the post-reverse stock split shares received will include the holding period of the pre-reverse stock split shares exchanged. The rounding up in respect of fractional shares will not result in a taxable event to a shareholder; however, there will be an adjustment to the shareholder's basis equal to the fractional share times the market value on the date of issuance. No gain or loss will be recognized by us as a result of the reverse stock split.

Required Vote

The affirmative vote of a majority of the votes represented in person or by proxy at the Annual Meeting is required for the adoption of the proposed amendment to the Restated Certificate of Incorporation to authorize us to effect a reverse stock split of our Common Stock in the range from 2:1 to 10:1, as determined in the sole discretion of the our Board of Directors. Proxies will be voted in accordance with the specifications marked thereon, and, if no specification is made, will be voted “FOR” the proposed reverse stock split.

RECOMMENDATION OF THE BOARD OF DIRECTORS

THE BOARD OF DIRECTORS UNANIMOUSLY RECOMMENDS THAT SHAREHOLDERS VOTE "FOR" THE AMENDMENT TO THE COMPANY'S RESTATED CERTIFICATE OF INCORPORATION TO EFFECT A REVERSE STOCK SPLIT IN THE RANGE FROM 2:1 TO 10:1, IN THE DISCRETION OF OUR BOARD OF DIRECTORS.