

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

FORM S-8

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

EMCORE CORPORATION

(Exact name of registrant as specified in its charter)

New Jersey

(State or Other Jurisdiction of Incorporation or Organization)

22-2746503

(I.R.S. Employer Identification No.)

**10420 Research Road SE
Albuquerque, New Mexico**

(Address of Principal Executive Offices)

87123

(Zip Code)

EMCORE Corporation 2000 Employee Stock Purchase Plan

(Full title of the plan)

**Keith J. Kosco, Esq.
Chief Legal Officer and Secretary
EMCORE Corporation
10420 Research Road SE
Albuquerque, New Mexico 87123**
(Name and address of agent for service)

(505) 332-5000

(Telephone number, including area code, of agent for service)

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

☐ Large accelerated filer ☒ **Accelerated filer** ☐ Non-accelerated filer ☐ Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered (1)(2)	Proposed maximum offering price per share (3)	Proposed maximum aggregate offering price (3)	Amount of registration fee(3)
Common Stock, no par value	2,500,000	\$1.35	\$3,375,000	\$188.33

- (1) Plus an indeterminate number of additional shares of Common Stock that may be offered and issued pursuant to stock dividends, stock splits, or similar transactions.
- (2) This registration statement is being filed for purposes of registering 2,500,000 additional shares of Common Stock of EMCORE Corporation, issuable pursuant to our 2000 Employee Stock Purchase Plan, as amended and restated (the "Plan"). We have previously registered an aggregate 2,000,000 shares pursuant to a registration statement on Form S-8 (File Nos. 333-37306 and 333-132318) under the Plan. The registration fee for the previously registered shares was paid at the time that the previous registration statement was filed.
- (3) Estimated pursuant to Rule 457(h) of the General Rules and Regulations under the Securities Act of 1933, as amended (the "Securities Act"), for the purpose of computing the registration fee, based on the average of the high and low sales price on The NASDAQ National Market on June 26, 2009.

INTRODUCTION

Pursuant to General Instruction E of Form S-8, the registrant, EMCORE Corporation (the “Registrant”), is filing this Registration Statement with respect to the issuance of an additional 2,500,000 shares of its common stock, no par value per share (the “Common Stock”), under the Plan.

On May 18, 2000 and March 11, 2006, the Registrant filed registration statements (the “Prior Registration Statements”) on Form S-8 (File No. 333-37306 and 333-132318, respectively) with respect to the issuance of an aggregate 2,000,000 shares (post-split) of Common Stock under the Plan. The contents of the Prior Registration Statements are hereby incorporated in this Registration Statement by reference.

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

Item 1. Plan Information

The documents containing the information specified in Part I of Form S-8 have been or will be sent or given to participants in the Plan as specified by Rule 428(b)(1) of the Securities Act. Such documents are not being filed with the Securities and Exchange Commission (the “Commission”) either as part of this Registration Statement or as prospectuses, or prospectus supplements pursuant to Rule 424 of the Securities Act, but constitute (along with the documents incorporated by reference into this Registration Statement pursuant to Item 3 of Part II hereof) a prospectus that meets the requirements of Section 10(a) of the Securities Act.

Item 2. Registrant Information and Employee Plan Annual Information

The Registrant will, upon written or oral request, provide without charge to any persons to whom the prospectuses relating to this Registration Statement are delivered, a copy of any and all of the information which has been incorporated by reference in such prospectuses and this Registration Statement (pursuant to Item 3 of Part II hereof). Such requests should be directed to the Secretary, EMCORE Corporation, 10420 Research Road SE, Albuquerque, New Mexico 87123, (505) 332-5000.

PART II
INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference

The following documents which have been filed by the Registrant with the Commission pursuant to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated by reference herein and shall be deemed to be a part hereof:

- (a) The Registrant's Annual Report on Form 10-K for the year ended September 30, 2008;
- (b) The Registrant's Quarterly Report on Form 10-Q for the quarter ended December 31, 2008;
- (c) The Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2009;
- (d) All Current Reports filed (not furnished) by the Registrant pursuant to Section 13(a) or 15(d) of the Exchange Act since September 30, 2008; and
- (e) The description of the Registrant's Common Stock contained in the Registrant's registration statement on Form 8-A filed with the Commission on February 26, 1997, including any amendments thereto or reports filed for the purpose of updating such description.

In addition, all documents subsequently filed by the Registrant with the Commission pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment to this Registration Statement, which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and made a part hereof from their respective dates of filing (other than filings or portions of filings that are furnished under applicable SEC rules rather than filed) (such documents, and the documents enumerated above, being hereinafter referred to as "Incorporated Documents").

Any statement contained in an Incorporated Document shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed Incorporated Document modifies or supersedes such statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 8. Exhibits

The exhibits filed as part of this Registration Statement are as follows:

<u>Exhibit No.</u>	<u>Exhibit Description</u>
4.1	2000 Employee Stock Purchase Plan, as amended and restated on April 30, 2009 (incorporated by reference to Exhibit 10.2 of the Registrant's Current Report on Form 8-K filed on May 6, 2009).
4.2	Restated Certificate of Incorporation, dated April 4, 2008 (incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on April 4, 2008).
4.3	Amended By-Laws, as amended through August 7, 2008 (incorporated by reference to Exhibit 3.1 to Registrant's Current Report on Form 8-K filed on August 13, 2008).
5.1	Opinion of Dillon, Bitar & Luther, L.L.C.*
23.1	Consent of Dillon, Bitar & Luther, L.L.C (included in its opinion filed as Exhibit 5.1 in this Registration Statement).*
23.2	Consent of Deloitte & Touche LLP.*
24.1	Powers of Attorney (included on the signature pages to this Registration Statement).*

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Albuquerque, State of New Mexico, on June 30, 2009.

EMCORE CORPORATION

By: /s/ Keith J. Kosco
Keith J. Kosco, ESQ
Chief Legal Officer and Secretary

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints and hereby authorizes Hong Q. Hou, and, severally, such person's true and lawful attorneys-in-fact, with full power of substitution or resubstitution, for such person and in his name, place and stead, in any and all capacities, to sign on such person's behalf, individually and in each capacity stated below, any and all amendments, including post-effective amendments to this Form S-8, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Commission granting unto said attorneys-in-fact, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact, or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this report has been signed below by the following persons on behalf of the Registrant in the capacities indicated, on June 30, 2009.

Signature

Title

/s/ Thomas J. Russell Chairman Emeritus and Lead Director
Thomas J. Russell, Ph.D

/s/ Reuben F. Richards, Jr. Executive Chairman & Chairman of the Board
Reuben F. Richards, Jr.

/s/ Hong Q. Hou Chief Executive Officer and Director (Principal Executive Officer)
Hong Q. Hou, Ph.D

/s/ John M. Markovich Chief Financial Officer (Principal Financial and Accounting Officer)
John M. Markovich

/s/ Charles T. Scott Director
Charles T. Scott

/s/ John Gillen Director
John Gillen

/s/ Robert Bogomolny Director
Robert Bogomolny

INDEX TO EXHIBITS

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* Filed herewith.

DILLON, BITAR & LUTHER L.L.C.
53 MAPLE AVENUE
MORRISTOWN, NJ 07960

EMCORE Corporation
10420 Research Road, S.E.
Albuquerque, NM 87123

Re: EMCORE Corporation
Registration Statement on Form S-8

Ladies and Gentlemen:

We are providing this opinion letter in our capacity as special counsel to EMCORE Corporation, a New Jersey corporation (the "Company"), in connection with the filing by the Company of a registration statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"), with the United States Securities and Exchange Commission (the "Commission"). The Registration Statement relates to the registration of 2,500,000 shares of the Company's common stock (the "Shares") issued pursuant to the Company's 2000 Employee Stock Purchase Plan (the "Plan").

You have requested that we render the opinion set forth in this letter and we are furnishing this opinion in accordance with the requirements of Part II, Item 8 of Form S-8 and Item 601(b)(5)(i) of Regulation S-K promulgated by the Commission under the Securities Act.

In connection with the foregoing registration, we have examined originals, or copies certified or otherwise identified to our satisfaction of, (i) the Registration Statement in the form provided to us by the Company, (ii) the Company's Restated Certificate of Incorporation, as amended and restated to date (the "Certificate of Incorporation"), (iii) the Company's By-Laws, as amended and/or restated to date (the "By-Laws"), (iv) certain resolutions of the Board of Directors of the Company relating to the Shares and the registration thereof, and (v) such other documents as we have deemed necessary or appropriate for purposes of rendering the opinion set forth herein.

In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such latter documents. As to any facts material to the opinion expressed herein that were not independently established or verified, we have relied upon statements and representations of officers and other representatives of the Company and others.

We do not express or purport to express any opinions with respect to laws other than the Federal laws of the United States and the laws of the State of New Jersey.

Based upon and subject to the foregoing, we are of the opinion that the Shares will, if issued and delivered in accordance with the terms and provisions of the Plan, be validly issued, fully paid and nonassessable.

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

This opinion is limited to the specific issues addressed herein, and no opinion may be inferred or implied beyond that expressly stated herein. We assume no obligation to revise or supplement this opinion should present Federal laws or the present laws of the State of New Jersey be changed by legislative action, judicial decision or otherwise.

Very truly yours,

/s/ Dillon, Bitar & Luther, L.L.C.
DILLON, BITAR & LUTHER, L.L.C.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of our reports relating to the consolidated financial statements of EMCORE Corporation and subsidiaries (which report expresses an unqualified opinion and includes an explanatory paragraph relating to EMCORE Corporation's ability to continue as a going concern) and the effectiveness of EMCORE Corporation's internal control over financial reporting dated December 30, 2008, appearing in the Annual Report on Form 10-K of EMCORE Corporation for the year ended September 30, 2008.

/s/ Deloitte & Touche LLP

Deloitte & Touche LLP

Dallas, Texas

June 30, 2009