

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

FORM 12b-25

NOTIFICATION OF LATE FILING

SEC FILE NUMBER: 0-22175

CUSIP NUMBER: 290846104

(check one) ☐
Q

☐ Form 10-K
☐ Form N-SAR ☐ Form N-CSR

☐ Form 20-F

☐ Form 11-K

☒ Form 10-

For the Period Ended:

December 31, 2008

- ☐ Transition Report on Form 10-K
- ☐ Transition Report on Form 20-F
- ☐ Transition Report on Form 11-K
- ☐ Transition Report on Form 10-Q
- ☐ Transition Report on Form N-SAR

For the Transition Period Ended: _____

If the notification relates to a portion of the filing checked above, identify the Item(s) to which the notification relates: **Not applicable**

PART I - REGISTRANT INFORMATION

Full Name of Registrant:

EMCORE Corporation

Former Name, if applicable:

Not applicable

Address of Principal Executive Office (Street and Number):

10420 Research Road, SE

City, State, and Zip Code:

Albuquerque, NM 87123

PART II - RULES 12b-25(b) AND (c)

If the subject report could not be filed without unreasonable effort or expense and the registrant seeks relief pursuant to Rule 12b-25(b), the following should be completed.

(Check box if appropriate) ☒

(a) The reasons described in reasonable detail in Part III of this form could not be eliminated without unreasonable effort or expense;

(b) The subject annual report, semi-annual report, transition report on Form 10-K, Form 20-F, Form 11-K, Form N-SAR or Form N-CSR, or portion thereof, will be filed on or before the fifteenth calendar day following the prescribed due date; or the subject quarterly report of transition report on Form 10-Q, or portion thereof will be filed on or before the fifth calendar day following the prescribed due date; and

(c) The accountant's statement or other exhibit required by Rule 12b-25(c) has been attached if applicable.

PART III - NARRATIVE

State below in reasonable detail the reasons why Forms 10-K, 20-F, 11-K, 10-Q, N-SAR, N-CSR, or the transition report portion thereof, could not be filed within the prescribed time period.

EMCORE Corporation (the "Company") received a letter from the SEC dated January 30, 2009 containing comments on the Company's Form 10-K for the fiscal year ended September 30, 2008 and requesting that certain disclosures be revised in future filings in response to the comments contained in that letter. The Company is in the process of preparing appropriate responses to the SEC comment letter, but was unable to complete those revisions to the disclosures contained in the Form 10-Q for the quarter ended December 31, 2008 by the filing due date of February 9, 2009. The Company believes that it will be able to

revise the disclosures in the Form 10-Q to comply with certain comments contained in the SEC comment letter within the five-day period provided under Rule 12b-25(b)(2)(ii). The Company has also received an extension from the SEC to respond to its remaining comments following the filing of the Form 10-Q for the quarter ended December 31, 2008.

PART IV-- OTHER INFORMATION

(1) Name and telephone number of person to contact in regard to this notification

Keith J. Kosco
(Name)

(505)
(Area Code)

332-5000
(Telephone Number)

(2) Have all other periodic reports required under Section 13 or 15(d) of the Securities Exchange Act of 1934 or Section 30 of the Investment Company Act of 1940 during the preceding 12 months or for such shorter period that the registrant was required to file such report(s) been filed? If answer is no, identify report(s). ☒ Yes ☐ No

(3) Is it anticipated that any significant change in results of operations from the corresponding period for the last fiscal year will be reflected by the earnings statements to be included in the subject report or portion thereof? ☒ Yes ☐ No

If so, attach an explanation of the anticipated change, both narratively and quantitatively, and, if appropriate, state the reasons why a reasonable estimate of the results cannot be made.

On February 9, 2009, the Company issued a press release disclosing its preliminary unaudited results for its first quarter ended December 31, 2008. The Company reported a consolidated net loss of \$53.4 million, or \$0.69 loss per share for the quarter ended December 31, 2008. For the quarter ended December 31, 2007, the Company reported a consolidated net loss of \$14.4 million, or \$0.28 loss per share.

As required by Statement of Financial Accounting Standard No. 142, Goodwill and Other Intangible Assets, the Company evaluated its goodwill for impairment as of December 31, 2008. As a result of the unfavorable macroeconomic environment and a significant reduction in the Company's market capitalization during the period, we determined that the goodwill related to our Fiber Optics segment was impaired resulting in a \$31.8 million non-cash impairment charge. The Company also recorded a non-cash impairment charge totaling \$1.9 million related to in-process research & development (IPR&D) acquired through the Company's February 2008 acquisition of the telecom-related assets of Intel Corporation. As part of cost cutting initiatives intended to generate cash, management discontinued certain R&D projects, two of which were associated with the Company's capitalized IPR&D. As of December 31, 2008, the Company's balance sheet no longer reflects any goodwill associated with its Fiber Optics segment or any capitalized IPR&D.

This notification of late filing on Form 12b-25 contains forward-looking statements regarding the Company's expectations concerning the filing of its Quarterly Report on Form 10-Q for its quarter ended December 31, 2008. These forward-looking statements are based on the Company's current expectations and are subject to risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof, and the Company undertakes no obligation to update these forward-looking statements to reflect subsequent events or circumstances.

EMCORE Corporation
(Name of Registrant as Specified in Charter)

has caused this notification to be signed on its behalf by the undersigned hereunto duly authorized.

Date: **February 10, 2009**

By: **/s/John M.**
Markovich

Name: John M.

Markovich

Title: Chief Financial
Officer

INSTRUCTION: The form may be signed by an executive officer of the registrant or by any other duly authorized representative. The name and title of the person signing the form shall be typed or printed beneath the signature. If the statement is signed on behalf of the registrant by an authorized representative (other than an executive officer), evidence of the representative's authority to sign on behalf of the registrant shall be filed with the form.

ATTENTION

Intentional misstatements or omissions of fact constitute Federal Criminal Violations (See 18 U.S.C. 1001).