

April 6, 2011

Mr. Brian Cascio
Accounting Branch Chief
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: EMCORE Corporation
Form 10-K for the fiscal year ended September 30, 2010
Filed January 10, 2011
File No. 000-22175

Dear Mr. Cascio:

EMCORE Corporation (the "Company") respectively submits the following responses to the comment letter dated March 24, 2011 that we received from the Staff of the United States Securities and Exchange Commission (the "Staff") regarding the Company's Annual Report on Form 10-K for the fiscal year ended September 30, 2010 (the "Form 10-K"). The Company's responses below correspond to the captions and numbers of those comments (which are reproduced below in *italics*). Unless otherwise indicated, capitalized terms used below have the meanings assigned to them in the Form 10-K.

Form 10-K for the fiscal year ended September 30, 2010

Item 8. Financial Statements

Note 2. Revenue Recognition, page 58

1. We refer to your response to prior comment 8. You indicate that the solar panel and solar power systems contracts fall within the scope of FASB ASC 605-35. In future filings, please provide a general description of the substance of the contractual arrangements to clarify why percentage-of-completion accounting is appropriate under the scope set forth in FASB ASC 605-35-15-2 and 15-3.

RESPONSE:

In response to the Staff's comment, we have prepared a draft of our new disclosure related to revenue recognition on long-term solar panel and solar power system contracts that will be disclosed in future filings:

Pursuant to ASC 605-35, *Revenue Recognition – Construction-Type and Production*, the Company records revenue on long-term solar panel and solar power system contracts using either the percentage-of-completion method or the completed contract method. In general, the performance of these types of contracts involves the design, development, and manufacture of complex aerospace or electronic equipment to our customer's specifications. The percentage-of-completion method is used by the Company in circumstances in which all the following conditions exist:

- The contract includes enforceable rights regarding goods or services to be provided to the customer, the consideration to be exchanged, and the manner and terms of settlement;
- Both the Company and the customer are expected to satisfy all of the contractual obligations; and,
- Reasonably reliable estimates of total revenue, total cost, and the progress toward completion can be made.

The percentage-of-completion method recognizes estimates for contract revenue and costs in progress as work on the contract continues. Estimates are revised as additional information becomes available. If estimates of costs to complete a contract indicate a loss, a provision is made at that time for the total loss anticipated on the contract.

The Company uses the completed contract method if reasonably dependable estimates cannot be made or for which inherent hazards make estimates doubtful. Under the completed contract method, contract revenue and costs in progress are deferred as work on the contract continues. If a loss becomes evident on the contract, a provision is made at that time for the total loss anticipated on the contract. Total contract revenue and related costs are recognized upon the completion of the contract.

Form 10-Q for the quarterly period ended December 31, 2010

Notes to Condensed Consolidated Financial Statements, page 7

Note 4. Receivables, page 12

2. With respect to your receivables related to percentage-of-completion, we see the allowance for doubtful accounts is approximately 30% of outstanding receivables as of December 31, 2010 and that the proportion of receivables reserved appears to be significantly greater than for arrangements not accounted for on a percentage-of-completion basis. Please tell us the reasons for the significant reserve related to percentage-of-completion receivables, including any impact on the appropriateness of the percentage-of-completion accounting method for the underlying

arrangements. Additionally, tell us how you considered whether collectability is reasonably assured in your percentage-of-completion revenue recognition policy. Refer to SAB Topic 13.A.1.

RESPONSE:

The allowance for doubtful accounts on accounts receivable generated from arrangements accounted for using the percentage-of-completion method relates to a fixed-priced international solar power system contract in which uncertainty with respect to its total collectability arose subsequent to the project's completion.

The Company accounted for this contract using the percentage-of-completion method for the following reasons:

- The contract included enforceable rights regarding goods to be provided to the customer, the consideration to be exchanged, and the manner and terms of settlement;
- Both the Company and the customer were expected to satisfy all of the contractual obligations; and,
- The Company believed that reasonably reliable estimates of total revenue, total cost, and the progress toward completion could be made on this contract.

The Company anticipated and recorded a loss on this contract when it was signed in March 2008 because estimated costs exceeded contractual payments. The Company recorded increases in its estimate of total anticipated loss related to this contract in subsequent periods when additional losses became evident. No gross profit was recorded on this contract during any quarterly period reported by the Company.

When the Company began recording revenue on this contract during the quarter ended March 31, 2008, collectability on this contract was considered to be reasonably assured by management since construction and project financing had been arranged by the customer. Unfortunately, the financing was not finalized during fiscal 2008 due to unexpected delays with a new bank credit facility that would have supported international letters of credit associated with this contract. After the new bank credit facility agreement was signed in September 2008, financial and economic conditions began to deteriorate. In early 2009, the customer's bank chose to not approve project financing related to this contract and the Company recorded a partial reserve on the outstanding receivable related to this contract during the three months ended June 30, 2009. A year later, after several rounds of discussions between management and the customer, the Company decided to record an additional reserve on this receivable during the three months ended June 30, 2010. We believe that the collectability of the remaining net receivable recorded is reasonably assured at this time.

Management continues to assess the collectability on this accounts receivable at each subsequent quarter-end. If conditions develop that impact the ability of the customer to pay the Company for this accounts receivable, additional allowance may be required.

Note 13. San'an Joint Venture, page 20

3. We refer to your disclosure that you will receive \$8.5 million in consulting fees related to a technology license, related support, and strategic consulting services provided to Suncore. Please tell us how you plan to account for the consulting fees and clarify the basis in GAAP for your determination.

RESPONSE:

Although the accounting treatment for this quarter's transactions is still subject to final review by management and our auditors, at this time the Company plans to record the consulting fees as a reduction of the Company's investment in Suncore pursuant to ASC 323-10-25, *Investments—Equity Method and Joint Ventures*, for the reasons described below.

On July 30, 2010, the Company entered into an agreement (the "JV Agreement") for the establishment and operation of a joint venture (Suncore Photovoltaic Technology Co., Ltd. or "Suncore") with San'an Optoelectronics Co., Ltd. ("San'an") for the purpose of engaging in the development, manufacturing, and distribution of CPV receivers, modules, and systems for terrestrial solar power applications under technology licensing from the Company.

Pursuant to the JV Agreement, the Company entered into a Technology License Agreement with Suncore and also a Cooperation Agreement and Entrustment Contract with an affiliate of San'an on July 30, 2010 stating that the Company would provide a technology license and technical support at no cost to Suncore according to the relevant provisions of the Technology License Agreement. In addition, the Company would also be responsible to prepare a research report with respect to the development strategy for renewable energy with CPV terrestrial solar power application solutions and update this report within a two-year period. Accordingly, the Company would be paid a consultation fee of \$8.5 million for the above-mentioned services. Afterwards, the Company could be eligible to receive follow-on consulting fees.

Financial Activity-to-Date

Consulting fees:

In August 2010, the Company received \$3.0 million as a prepayment of consulting fees. Since Suncore had not been established, and if ultimately not established, the Company would have been required to refund the \$3 million prepayment, the Company recorded this amount as an advanced payment within accrued liabilities as of September 30, 2010 and December 31, 2010. In March 2011, the Company received another payment of consulting fees totaling \$1.5 million.

Capital contributions:

The establishment of the Suncore entity which was subject to Chinese regional government approval occurred on January 12, 2011. As required, the Company contributed \$4.0 million to Suncore in February 2011 and the Company expects to contribute the remaining portion of its contractual commitment totaling \$8.0 million by August 26, 2011.

Accounting Treatment:

As described above, the Company considers the Technology Licensing Agreement to be tied directly into the JV Agreement, the Cooperation Agreement, and the Entrustment Contract. The Company is providing a technology license, technical support, and consultation at no cost to Suncore and the Company in return is receiving consulting fees. Management reviewed the substance of the \$8.5 million consulting fee arrangement and concluded that the consulting fees are tied to the nonmonetary assets being contributed to the Suncore joint venture at formation. As of March 31, 2011, the Company plans to present the deferred consulting fees as a reduction of the Company's investment in Suncore. At March 31, 2011, the Company's investment in Suncore will result in a credit balance and be presented as a negative equity investment in the Suncore joint venture totaling \$0.5 million.

4. In regards to the Investment and Cooperation Agreement, please tell us whether you will be required to provide funding in addition to the initial \$12 million investment in Suncore to construct the Suncore facility. To the extent you are required to provide additional funding, please tell us how you considered disclosing the amount and timing of the obligation.

RESPONSE:

The Company is not required by the JV Agreement to contribute additional funds in excess of the initial \$12 million investment. In addition, at this time management does not anticipate funding Suncore any amount in excess of its contractual capital commitment of \$12 million. The JV Agreement provides for any working capital needs to be provided by San'an. It should also be noted that the Suncore joint venture has received a significant grant from the Huainan Municipal Government in China that will be used solely for the purchase of capital equipment for the development of Suncore's operations in Huainan.

* * *

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 me at (505) 559.2810 if you have any questions regarding the above responses.

Sincerely,

/s/ Mark Weinswig

Mark Weinswig
Chief Financial Officer
EMCORE Corporation