



DIVISION OF
CORPORATION FINANCE
Mail Stop 3030

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

March 16, 2010

Mr. Deepak Chopra
President and Chief Executive Officer
OSI Systems, Inc.
12525 Chadron Avenue
Hawthorne, CA 90250

**Re: OSI Systems, Inc.
Post-Effective Amendment to Form S-3
Filed March 9, 2010
File No. 333-100791**

Dear Mr. Chopra:

We have limited our review of your filing to those issues we have addressed in our comment. Where indicated, we think you should revise your document in response to this comment. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

General

1. We note that the staff of the Division of Corporation Finance currently has outstanding comments relating to the company's Form 10-K for the fiscal year ended June 30, 2009. Please note that all comments relating to the staff's open review of your Form 10-K and related filings will need to be resolved before effectiveness of the post-effective amendment.

Mr. Deepak Chopra
OSI Systems, Inc.
March 16, 2010
Page 2

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As appropriate, please amend your filing in response to this comment. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your response to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comment.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Before the amended registration statement is declared effective pursuant to Section 8 of the Securities Act, the company should provide us with a letter, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

Mr. Deepak Chopra
OSI Systems, Inc.
March 16, 2010
Page 3

Please contact Louis Rambo at (202) 551-3289 or me at (202) 551-3625 with any questions.

Sincerely,

Mary Beth Breslin
Senior Attorney

cc: Gerald M. Chizever, Esq.
Via Facsimile (310) 919-3970