

KLA-Tencor Corporation
One Technology Drive
Milpitas, CA 95305

June 6, 2018

Via EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street, NE
Washington, DC 20549
Attn: Amanda Ravitz
Tom Jones

**Re: KLA-Tencor Corporation
Registration Statement on Form S-4 (File No. 333-224982)
Acceleration Request**

Dear Ms. Ravitz and Mr. Jones:

Pursuant to Rule 461 of the Securities Act of 1933, as amended, KLA-Tencor Corporation, a Delaware corporation (the “**Issuer**”), hereby respectfully requests that the effectiveness of the above captioned registration statement be accelerated so that it becomes effective at 4:00 p.m., Eastern Time, on Thursday, June 7, 2018, or as soon thereafter as practicable.

The Issuer hereby acknowledges the following:

- should the Securities and Exchange Commission (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 Issuer from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the Issuer 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.

Please contact Bradley L. Finkelstein, Esq. of Wilson Sonsini Goodrich & Rosati P.C. at (650) 565-3514 with any questions you may have concerning this request.

In addition, please provide a copy of the Commission’s order declaring the registration statement effective to Mr. Finkelstein via facsimile at (650) 493-9300 and via mail at Wilson Sonsini Goodrich & Rosati, Professional Corporation, 650 Page Mill Road, Palo Alto, California 94304-1050.

Sincerely,

KLA-TENCOR CORPORATION

By: /s/ Teri A. Little
Name: Teri A. Little
Title: Executive Vice President and Chief Legal Officer