



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 3030

May 24, 2018

Via E-mail

Teri A. Little  
Chief Legal Officer  
KLA-Tencor Corporation  
One Technology Drive  
Milpitas, California 95305

**Re: KLA-Tencor Corporation  
Registration Statement on Form S-4  
Filed May 16, 2018  
File No. 333-224982**

Dear Ms. Little:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Tom Jones at (202) 551-3602 with any questions.

Sincerely,

/s/ Tom Jones for

Amanda Ravitz  
Assistant Director  
Office of Electronics and Machinery

cc: Bradley L. Finkelstein, Esq.