



DIVISION OF  
CORPORATION FINANCE

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

Mail Stop 6010

March 14, 2008

VIA U.S. MAIL

Jeffrey L. Hall  
Chief Financial Officer  
KLA-Tencor Corporation  
One Technology Drive  
Milpitas, California 95035

**Re: KLA-Tencor Corporation**  
**Form 10-K for the year ended June 30, 2007**  
**Filed August 20, 2007**  
**File No. 000-09992**

Dear Mr. Hall:

We have completed our review of your Form 10-K and related filings and do not, at this time, have any further comments.

Sincerely,

Angela Crane  
Branch Chief