



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

December 3, 2008

VIA U.S. MAIL

Mr. Mark P. Dentinger
Executive Vice President 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, 2008
Filed August 7, 2008
File No. 000-09992

Dear Mr. Dentinger:

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
Accounting Branch Chief