

Mail Stop 6010

June 20, 2006

Mr. Steven R. Roth
Chief Financial Officer
Rudolph Technologies, Inc.
One Rudolph Road
PO Box 1000
Flanders, New Jersey 07836

**Re: Rudolph Technologies, Inc.
Form 10-K for the Year Ended December 31, 2005 and related filings
Form 10-Q for the Quarter Ended March 31, 2006
File No. 000-27965**

Dear Mr. Roth:

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

Sincerely,

Martin F. James
Senior Assistant Chief Accountant