



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

April 8, 2009

VIA U.S. MAIL

Mr. Robert E. Hult
Senior Vice President and Chief Financial Officer
Mercury Computer Systems, Inc.
201 Riverneck Road
Chelmsford, MA 01824

**Re: Mercury Computer Systems, Inc.
Form 10-K for the year ended June 30, 2008
Filed September 12, 2008
File No. 000-25839**

Dear Mr. Hult:

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