



DIVISION OF
CORPORATION FINANCE

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

February 17, 2011

Mr. Robert E. Hult
Chief Financial Officer
Mercury Computer Systems, Inc.
201 Riverneck Road
Chelmsford, Massachusetts 01824

**Re: Mercury Computer Systems, Inc.
Form 10-K for the year ended June 30, 2010
File No. 000-23599**

Dear Mr. Hult:

We have completed our review of your filings and do not have any further comments at this time.

Sincerely,

Jeff Jaramillo
Accounting Branch Chief