



DIVISION OF
CORPORATION FINANCE

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

December 16, 2010

Mr. James E. Levine
Chief Financial Officer
Verenium Corporation
55 Cambridge Parkway
Cambridge, Massachusetts 02142

Re: Form 10-K for the Year Ended December 31, 2009
Form 10-Q for the Period Ended September 30, 2010
Definitive 14A filed April 30, 2010
File No. 0-29173

Dear Mr. Levine:

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

Sincerely,

Rufus Decker
Accounting Branch Chief