



DIVISION OF
CORPORATION FINANCE

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

February 7, 2011

Robert A. Cascella
Chief Executive Officer
Hologic, Inc.
35 Crosby Drive
Bedford, MA 01730

Re: Hologic, Inc.
Definitive Proxy Statement on Schedule 14A
Filed January 19, 2010
File No. 000-18281

Dear Mr. Cascella:

We have completed our limited review of your filing and do not have any further comments at this time. Please contact Aslynn Hogue at (202) 551-3841 with any questions.

Sincerely,

Russell Mancuso
Branch Chief

CC (by facsimile): Glenn P. Muir, Chief Financial Officer