



DIVISION OF  
CORPORATION FINANCE

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549-4631

Mail Stop 4631

April 21, 2010

Mr. Eduardo E. Cordeiro  
Executive Vice President and Chief Financial Officer  
Cabot Corporation  
Two Seaport Lane, Suite 1300  
Boston, MA 02210

**RE: Form 10-K for the year ended September 30, 2009  
Form 10-Q for the period ended December 31, 2009  
Schedule 14A filed on January 28, 2010  
File No. 1-5667**

Dear Mr. Cordeiro:

We have completed our review of your Form 10-K and related filings and have no further comments at this time.

If you have any further questions regarding our review of legal or disclosure matters in your filings, please direct them to Era Anagnosti, Staff Attorney, at (202) 551-3369 or, in her absence, Craig Slivka, Special Counsel, at (202) 551-3729. Please contact Jeffrey Gordon, Staff Accountant, at (202) 551-3866 or, in his absence, Nudrat Salik, Staff Accountant, at (202) 551-3692 if you have questions regarding our review of the financial statements and related matters.

Sincerely,

Rufus Decker  
Accounting Branch Chief