



DIVISION OF  
CORPORATION FINANCE

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

August 6, 2010

Ms. Patricia A. Gray  
Senior Vice President and General Counsel  
American Science and Engineering, Inc.  
829 Middlesex Turnpike  
Billerica, Massachusetts 01821

**Re: American Science and Engineering, Inc.**  
**Form 8-K for Item 4.01**  
**Filed on July 26, 2010**  
**Amended on August 5, 2010**  
**File No. 001-06549**

Dear Ms. Gray:

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

Sincerely,

Brian Cascio  
Accounting Branch Chief