



DIVISION OF  
CORPORATION FINANCE

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

July 6, 2010

*By U.S. mail and facsimile to (440) 930-1002*

Mr. Robert M. Patterson, Senior Vice President and Chief Financial Officer  
PolyOne Corporation  
33587 Walker Road  
Avon Lake, OH 44012

**RE: PolyOne Corporation**  
**Form 10-K for the fiscal year ended December 31, 2009**  
**Filed February 18, 2010**  
**File No. 1-16091**

Dear Mr. Patterson:

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

Sincerely,

Terence O'Brien  
Branch Chief