



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