

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

Mail Stop 4631

February 18, 2010

Mr. Paul E. Huck Senior Vice President and Chief Financial Officer Air Products and Chemicals, Inc. 7201 Hamilton Boulevard Allentown, PA 18195

> RE: Form 10-K for the year ended September 30, 2009 Form 10-Q for the period ended December 31, 2009 File No. 1-4534

Dear Mr. Huck:

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 your filings, please direct them to Jeffrey Gordon, Staff Accountant, at (202) 551-3866 or, in his absence, to the undersigned at (202) 551-3689.

Sincerely,

John Hartz Senior Assistant Chief Accountant