



DIVISION OF
CORPORATION FINANCE

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

January 12, 2012

Via E-mail

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

**RE: Air Products and Chemicals, Inc.
Form 10-K for the Year ended September 30, 2011
Filed November 22, 2011
File No. 1-4534**

Dear Mr. Huck:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended September 30, 2011

General

1. Where a comment below requests additional disclosures or other revisions to be made, please show us in your supplemental response what the revisions will look like. These revisions should be included in your future filings.

Item 7 – Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 18

Liquidity and Capital Resources, page 28

2. Given your significant foreign operations, please enhance your liquidity disclosure to address the following:
 - Disclose the amount of foreign cash and cash items and short-term investments you have as compared to your total amount of cash and cash items and short-term investments as of September 30, 2011; and
 - Discuss the fact that if the foreign cash and cash equivalents are needed for your operations in the U.S., you would be required to accrue and pay U.S. taxes to repatriate these funds but your intent is to permanently reinvest these foreign amounts outside the U.S. and your current plans do not demonstrate a need to repatriate the foreign amounts to fund your U.S. operations, if true.Refer to Item 303(a)(1) of Regulation S-K, SEC Release 33-8350 Section IV and Financial Reporting Codification 501.06.a.

Item 8 – Financial Statements and Supplementary Data, page 42

Note 21 – Income Taxes, page 82

3. It appears that you generate a significant amount of income from continuing operations before income taxes from locations outside of the United States and a significant portion of your provision for income taxes is also composed of non-U.S. amounts. Please tell us what countries comprise a material amount of your foreign taxes and whether you generate a disproportionate amount of taxable income in countries with very low tax rates.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

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You may contact Jeffrey Gordon, Staff Accountant, at (202) 551-3866 or, in his absence, the undersigned at (202) 551-3689 if you have questions regarding these comments.

Sincerely,

/s/ Jeffrey Gordon for

John Hartz
Senior Assistant Chief Accountant