

Air Products and Chemicals Inc.
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Paul E. Huck
Sr. Vice President and
Chief Financial Officer

20 January 2012

Mr. John Hartz
Senior Assistant Chief Accountant
Securities and Exchange Commission
Division of Corporate Finance
Mail Stop 4631
100 F Street, N.E.
Washington, D.C. 20549

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

Dear Mr. Hartz:

In response to your letter of 12 January 2012, we provide the information below. Our responses have been numbered to correspond with the comments in your letter. The original comments, contained in your letter have been included in italics for reference during your review.

* * * * *

Comment 1 – General

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.

Response:

In future filings, we will make the revisions described in our response to your comment 2 as detailed below.

Comment 2 - Item 7 – Management’s Discussion and Analysis of Financial Condition and Results of Operations, page 18, Liquidity and Capital Resources, page 28

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.

Response:

In future filings, we will expand our discussion within Liquidity and Capital Resources to clarify any significant cash, and cash equivalents (cash items) held by our foreign subsidiaries. We will also disclose, if applicable, that we would need to accrue and pay taxes if the funds were repatriated and that we do not intend to repatriate the funds.

Revised Disclosure:

The Company will include the following disclosure within Liquidity and Capital Resources, updated for the current reporting period information:

As of 30 September 2011, we had \$409.9 of foreign cash and cash items compared to a total amount of cash and cash items of \$422.5. If the foreign cash and cash items are needed for operations in the U.S. or we otherwise elect to repatriate the funds, we may be required to accrue and pay U.S. taxes on a significant portion of these amounts. However, since we have significant current investment plans outside the U.S., it is our intent to permanently reinvest the majority of our foreign cash and cash items outside the U.S. Further, our current plans do not demonstrate a need to repatriate foreign funds in order to fund U.S. operations.

Comment 3 – Item 8 – Financial Statements and Supplementary Data, page 42, Note 21 – Income Taxes, page 82

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.

Response:

The following countries generated approximately 80% of the Company's foreign tax provision in fiscal year 2011:

- United Kingdom
- South Korea
- Brazil
- People's Republic of China
- Canada
- France
- Taiwan

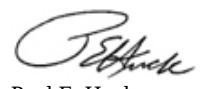
Additionally, our income from continuing operations before taxes in fiscal year 2011 for countries with statutory tax rates below 23% constituted approximately 6% of total foreign income from continuing operations before taxes and approximately 3% of total income from continuing operations before taxes. Therefore, the Company did not generate a disproportionate amount of income from continuing operations before taxes in countries with very low statutory tax rates and we believe our current disclosures are adequate. If this changes and the change could have a material impact on the Company's results of operations in the future or expose the Company's future results to uncertainties associated with economic or political conditions in low tax rate countries, we will revise our disclosures accordingly.

In connection with this response, management acknowledges that:

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

Should the staff require any additional information, please contact myself at 610-481-7932.

Sincerely,



Paul E. Huck
Sr. Vice President and Chief Financial Officer